



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407



October 27, 2008

Mr. William Bailey (ATTN: PD-E)  
Environmental Resources Branch  
U.S. Army Corps of Engineers  
100 West Oglethorpe Avenue  
Savannah, GA 31401-3640

Dear Mr. Bailey:

The U.S. Fish and Wildlife Service has reviewed the Draft Environmental Assessment (DEA) and Finding of No Significant Impact for the Savannah District's proposal to reduce discharges from the J. Strom Thurmond Dam, Georgia and South Carolina, in response to drought conditions. These comments are submitted in accordance with provisions of the National Environmental Policy Act and section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1543). Your letter requesting our review was dated October 14, 2008, and received on October 16, 2008.

### General Comments

We believe that the DEA does not provide a clear understanding of the environmental impacts that would result from the proposed action. In addition, we believe that the flow assumptions used in the document to develop the proposed minimum flow requirement are overly conservative. Using a reasonably conservative assumption (2007 flows) and continuing with the current reduction from the approved drought plan (3,600 cfs), the conservation pool will not be depleted until sometime after July 2012.

### Specific Comments

Section 1.1.1. Since October 23, 2007, well before level three was reached, agencies have cooperated to reduce flows more than called for in the approved drought plan and that fact should be discussed in this section of the document.

Section 3.2.2. The discussion of targets in the text and the table is not clear. Some targets are minima, some are maxima and some are not described at all. The target for shortnose sturgeon migration and how sturgeon monitoring will be performed are not identified in the document. As proposed in the document, the States are the only parties that the Corps will consult with to modify the plan if the targets are not met. Shortnose sturgeon is federally listed as endangered



and is under jurisdiction of NOAA Fisheries for section 7 for the Endangered Species Act. If that target (if it is defined in the future) is not met, then it would be appropriate to consider the views of NOAA. There may be other cases where it would be appropriate to consider the views of interests other than the states.

Section 3.2.4. The assumption of repeating the 2007 flow for five years is very conservative. Adding another 10% reduction to these already conservative flows appears to be unreasonably conservative. The current drought has been occurring for almost three years. Three years is a long drought and droughts lasting over four years are extremely rare in the southeastern U.S. (Todd Hamill, National Weather Service, written communication, 2008).

Section 4.1.2. The statement on algal activity increasing DO is misleading. While algal activity may increase DO during the day, DO is likely to decrease during the night due to lack of algal photosynthesis, continuing algal respiration and BOD due to decay of algal biomass. This DO pattern is well documented in many systems. The overall impact to the system is likely to be a decrease in DO.

Section 4.3. There is no binding agreement in place that would require the City of Augusta to provide a specific flow in the Augusta shoals. The source for the statement that the City will provide 1,000 to 1,500 cfs in the shoals needs to be cited. The flow identified in this section (1,000-1,500 cfs) is different from the target of 1,500 cfs in Section 3.2.2. How will the flows be monitored without adequate gauging at the site? What action will the Corps take if these shoal flows are not provided? Based on the inconsistencies in the document and the lack of a binding agreement with the City of Augusta, it is highly uncertain how much flow will remain in the shoals.

Section 4.5. The document does not discuss managed wetlands on Savannah National Wildlife Refuge in the estuary. This habitat is managed for migratory birds, including wintering waterfowl. Prescribed burning and water level control are used to increase preferred duck food plants and to suppress vegetation that is of less value to waterfowl. Moist soil management, which is used in most of the management units on Savannah NWR, produces the most productive waterfowl habitat. Fresh water is provided to the managed wetlands at the diversion canal on Little Back River (about river mile 24). On Savannah NWR these managed wetlands provide the most heavily used habitat for wintering waterfowl and wading birds. Based on mid-winter waterfowl surveys from 1990-2002, Savannah NWR provided habitat for an average of 23 percent of the waterfowl in South Carolina.

Freshwater management (salinity less than 0.5 ppt) is necessary to maintain maximum waterfowl use of the Refuge's managed wetlands. Studies have concluded that freshwater coastal impoundments in South Carolina produce a greater variety of marsh plants, many of which are desirable waterfowl food, than brackish impoundments. Therefore, it is essential that the refuge retain freshwater management to provide maximum benefits to the waterfowl resource.

Section 4.6. The one sentence in the document addressing impacts to the endangered shortnose sturgeon is not adequate to assess potential impacts to that species. Recent information indicates that shortnose sturgeon spawn on gravel bars in the Savannah River downstream of New

Savannah Bluff Lock and Dam as early as February 11 (Amanda Wrona, The Nature Conservancy, written communication, 2008). The proposed reduction in flow would reduce the amount of available gravel bar habitat. This impact could be reduced by restoring flow to 3,600 cfs on February 1. Shortnose sturgeon is under jurisdiction of NOAA Fisheries for section 7 for the Endangered Species Act.

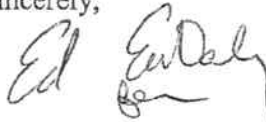
Based on the information received, we will concur with your determination that this action is not likely to adversely affect federally listed or proposed endangered and threatened species under our jurisdiction, including the wood stork and manatee.

#### Summary Comments

Based on reasonable assumptions, there is adequate storage until July 2012 or later. If drought conditions do not improve, we would concur with a proposed temporary flow reduction to be implemented in October 2009. We also recommend that no flow reductions be implemented at any time if reservoir levels are above trigger level 3. The conditions for reverting to the approved drought plan need to be clearly defined prior to any flow reduction. In addition, when the drought ends, we recommend that the Corps assess and report on how effective the current approved drought plan would have been (how much conservation storage would have remained) without the proposed temporary reduction.

If you have any questions or wish to discuss our recommendations, please contact Ed EuDaly at 843-727-4707 x 227.

Sincerely,



Timothy N. Hall  
Field Supervisor

TNH/EME

*AB*  
*Do*  
*FW*  
*wetland*  
*comment*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

October 28, 2008

Colonel Edward J. Kertis, Jr.  
District Commander  
U.S. Army Corps of Engineers  
P. O. Box 889  
Savannah GA, 31402-0889

**SUBJ: EPA Comments on the Draft Finding of No Significant Impact (FONSI) and Environmental Assessment (EA) for "Proposed Temporary Deviation Drought Contingency Plan" for the Savannah River Basin**

Dear Colonel Kertis:

Consistent with Section 102(2)(c) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Finding of No Significant Impact (FONSI) and Environmental Assessment (EA) for the proposed "Temporary Deviation Drought Contingency Plan" for the Savannah River Basin. The proposed action consists of retaining the major components of the 1989 Savannah River Basin Drought Contingency Plan (SRBDGP) but "temporarily adjusting the minimum daily average release" at J. Strom Thurmond Dam from 3,600 to 3,100 cubic feet per second (cfs) in "drought Level 3 from November 1, 2008 through February 28, 2009." This change would reportedly preserve water in the US Army Corps of Engineers (Corps) reservoirs and delay the time at which those reservoirs would reach the bottom of their conservation storage. The Corps has agreed, though, to restore the water flows up to the 3,600 cfs per day daily average if requested by either the State of Georgia or State of South Carolina.

A public meeting was previously held by the Corps last December when Lake Hartwell entered Drought Contingency Level 2 (on Aug. 15, 2007), which resulted in limiting outflow from Thurmond Dam to a weekly average of 4,000 cubic feet per second (cfs). The increasing severity of the drought in recent months has forced the Corps to consider implementation of more drastic conservation measures in the Savannah River Basin by reducing outflows.

The Corps reportedly considered both a "no action" alternative, as well as an alternative utilizing a daily average flow reduction to 3,300 cfs for the cooler months (October 1 to February 28). After studying the 2007 hydrologic data, though, the Corps apparently rejected this option and determined that a release of 3,300 cfs from Thurmond Dam "would not sufficiently stabilize the reservoir system and improve the reservoir refill probabilities." The Corps maintains that the proposed action to temporarily deviate from the Drought Contingency Plan for the Savannah River Basin would "result in no significant environmental impacts and is the alternative that represents sound natural resource management practices and environmental standards."

The Corps reports the following findings:

The proposed action would not adversely affect any threatened or endangered species (may affect, but not likely to adversely affect shortnose sturgeon, manatee, and wood stork).

The proposed action would not adversely impact cultural resources.

The proposed action would not adversely impact air quality.

The proposed action complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."

The proposed action would not cause any significant long term adverse impacts to wetlands.

No unacceptable adverse cumulative or secondary impacts would result from the implementation of the proposed action.

EPA has reviewed potential environmental impacts of the proposed action, and agrees with the Corps that the Recommended Alternative will have beneficial effects on "conservation pool levels, water usage, recreation, boat-launching ramps and docks at Hartwell and J. Strom Thurmond Lakes." EPA does have some concerns regarding the Recommended Alternative's effect on downstream biological resources, including mussels in cut-off bends and other species in the Augusta Shoals area, as well adverse impacts that will occur to freshwater wetlands in the downstream Savannah River estuary. Since so much conversion of freshwater tidally influenced wetlands has already occurred due to the drought (and modifications to Savannah Harbor), perhaps any additional losses, no matter how modest, will be significant. The Corps should specify the Lead Agency on monitoring/ tracking wetland conversions.

EPA also has some concerns about the effect of the Recommended Alternative on implementation of Total Maximum Daily Load (TMDL) studies that have been prepared for the Savannah River. EPA, therefore, recommends the following actions be taken by the Corps if the Recommended Alternative is to be implemented:

A TMDL for "Total Mercury in Fish Tissue Residue" has been prepared for the Middle & Lower Savannah River Watershed for segments of Clarks Hill Lake Dam to Stevens Creek Dam, Stevens Creek Dam to US Highway 78/278, US Highway 78/278 to Johnsons Landing, Johnsons Landing to Brier Creek, and Brier Creek to the Tide Gate. The Corps should carefully review this TMDL study and ensure that the effect of the lowered minimum daily average release will not inhibit efforts at reducing mercury pollution in the river. EPA's TMDL staff is available for technical assistance on this and the other TMDL issues.

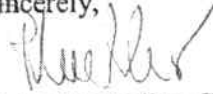
A TMDL for "Low Dissolved Oxygen" for the Savannah Harbor has been developed after extensive public involvement along with Federal and State agencies in a technical review role. The Savannah Harbor Estuary is noted for numerous anthropogenic, hydrological, and meteorological factors that influence the dissolved oxygen concentrations. Water, salinity, and temperature form a balance "under the influence of tidal intrusions of the ocean waters and freshwater

flow from upstream parts of Savannah River." Therefore, the Corps should carefully review this TMDL study and ensure that the effect of the lowered minimum daily average release will not inhibit efforts at implementing this TMDL.

- A TMDL for "Fecal Coliform" pathogens has been prepared for the Savannah River within Richmond County. The Corps should carefully review this TMDL study and ensure that the effect of the lowered minimum daily average release will not inhibit efforts at reducing pathogens pollution in the river.
- A TMDL for "Lead" has been prepared for the Savannah River between Butler & McBean Creek (and in Butler Creek itself). The Corps should carefully review this TMDL study and ensure that the effect of the lowered minimum daily average release will not inhibit efforts at reducing lead pollution in the river.
- For the period November 1, 2008 through February 28, 2009, the Corps (or the States) should commit sufficient resources for monitoring the effects of the lower discharge on downstream biological resources, including mussels in cut-off bends and other species in the Augusta Shoals area, and impacts in freshwater wetlands in the estuary. If adverse conditions are noted to be developing, the Corps should consult with State of Georgia, the State of South Carolina, and EPA about restoring the minimum daily average release of 3600 cfs for drought Level 3.

We appreciate the opportunity to review the EA and FONSI. Should you have questions, feel free to coordinate with Ted Bisterfeld of my staff, at 404/562-9621 or at [bisterfeld.ted@epa.gov](mailto:bisterfeld.ted@epa.gov), or Paul Gagliano, P.E., at 404/562-9373 or at [gagliano.paul@epa.gov](mailto:gagliano.paul@epa.gov).

Sincerely,



Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management

We need  
to decide  
why would  
we -  
- Delegated States  
to enforce  
the CWA



# **Georgia Department of Natural Resources**

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000  
Noel Holcomb, Commissioner  
Carol A. Couch, Ph.D., Director  
Environmental Protection Division  
404/656-4713

October 22, 2008

Mr. William Bailey (ATTN: PD-E)  
Environmental Resources Branch  
US Army Corps of Engineers, Savannah District  
100 West Oglethorpe Avenue,  
Savannah, GA 31401-3640

RE: Draft Environmental Assessment and Finding  
of No Significant Impact  
Temporary Deviation Drought Contingency  
Plan  
Savannah River Basin

Dear Mr. Bailey:

We have received your letter dated October 14, 2008 transmitting the referenced Environmental Assessment (EA). We have completed our review of the document and have no comment on the information provided. The Corps has done an excellent job in presenting the information necessary to support a Finding of No Significant Impact.

In addition, we greatly appreciate the quick turnaround by the Corps in processing Georgia and South Carolina's request for this temporary deviation to 3100 cfs. Through your efforts, appropriate action can be taken during this critical drought period to expeditiously address the significant decline in lake levels documented at Hartwell, Russell, and Thurmond.

Sincerely,



Carol Couch  
Director

# South Carolina Department of Natural Resources



Robert D. Perry  
Certified Wildlife Biologist  
Director, Office of Environmental Programs  
1000 Assembly Street Room 310A  
PO Box 167  
Columbia, SC 29202  
803-734-3766  
803-734-3767  
[perryb@dnr.sc.gov](mailto:perryb@dnr.sc.gov)

John E. Frampton  
Director  
Don Winslow  
Chief-of-Staff

October 24, 2008

Mr. William Bailey  
US Army Corps of Engineers  
Savannah District  
Mobile/Savannah Planning Center  
PO Box 889  
Savannah, GA 31520-8687

REFERENCE: Draft Environmental Assessment and Draft Finding of No Significant Impact Temporary Deviation Drought Contingency Plan Savannah River Basin

Dear Mr. Bailey,

Please be advised personnel of the South Carolina Department of Natural Resources (SCDNR) have reviewed the Draft Environmental Assessment (Draft EA) and Draft Finding of No Significant Impact (Draft FONSI) for a temporary deviation to the US Army Corps of Engineers' (USACE) Savannah River Basin Drought Contingency Plan on the Savannah River in Georgia and South Carolina.

The proposed action is a temporary revision to the USACE 1989 Savannah River Basin Drought Contingency Plan. The proposed revision would reduce minimum daily average discharge from the J. Strom Thurmond reservoir from 3,600 to 3,100 cfs during the winter months from November 1, 2008 through February 28, 2009 in order to preserve water in USACE Savannah River reservoirs in order to preserve conservation storage. USACE would restore discharges from the J. Strom Thurmond reservoir up to the present flow of 3,600 cfs if requested by either the state of Georgia or South Carolina.

SCDNR concurs with the Draft EA findings and recommendations as well as the Draft FONSI, and SCDNR urges implementation of the proposed action as stated beginning November 1, 2008.



Mr. William Bailey  
Draft EA & Draft FONSI Savannah River Basin Temporary Flow Deviation  
October 24, 2008

I am including as support to this correspondence a copy of a letter from SCDNR Director John E. Frampton which was forwarded earlier this month to Col. Edward J. Kertis, Jr., District Commander of the Savannah District. Director Frampton has urged implementation of the flow reduction plan as soon as possible.

This correspondence is being provided to the Georgia Department of Natural Resources, Coastal Resources Division and also to the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal resource Management pursuant to Coastal Zone Management Consistency Certification for both states. This correspondence will serve as official comments to these agencies from SCDNR.

If you or either or both of the respective staff responsible for Coastal Zone Management Consistency in Georgia or South Carolina have any further questions regarding these recommendations, please do not hesitate to contact me at your earliest convenience.

Sincerely,

***Robert D. Perry***

Robert D. Perry  
Director, Office of Environmental Programs

Enclosure as stated

c: Brad Gane  
Georgia Department of Natural Resources  
Coastal Resources Division  
Federal Consistency Coordinator  
Suite 300  
One Conservation Way  
Brunswick, GA 31520-8687

Tess Rogers  
SC Department of Health and Environmental Control  
Office of Ocean and Coastal resource Management  
1362 McMillan Avenue  
Suite 400  
Charleston, SC 29405

ec: Robert Boyles/SCDNR  
Breck Carmichael/SCDNR  
Steve DeKozlowski/SCDNR  
Tim Hall/FWS  
Pace Wilbur/NMFS

# South Carolina Department of Natural Resources



John E. Frampton  
Director

October 10, 2008

Col. Edward J. Kertis, Jr.  
District Commander  
U.S. Army Corps of Engineers  
Savannah District  
100 W. Oglethorpe Ave., PO Box 889  
Savannah, GA 31402-0889

Dear Colonel Kertis:

As we all are aware, the upper Savannah River basin has experienced a severe drought for the past two and a half years that, despite conservation efforts by the Corps of Engineers, has lowered water levels in Hartwell, Russell, and Thurmond Reservoirs to near record-low levels.

These reservoirs are extremely important to both South Carolina's and Georgia's economies, natural resources, and the health of our citizens. Not only are the reservoirs themselves vital to South Carolina and Georgia, but during this severe drought, releases from the reservoirs are enhancing the flow of the Savannah River, thereby protecting downstream ecosystems, public water supplies, industries, and power plants.

The South Carolina Department of Natural Resources (SCDNR) has worked cooperatively with representatives from the Georgia Environmental Protection Division (GAEPD), the South Carolina Department of Health and Environmental Control (SCDHEC), the U.S. Army Corps of Engineers, and other agencies and stakeholders to develop a proposal to delay the complete depletion of the lakes' conservation pools. Together, the States of South Carolina and Georgia have finalized a proposal to reduce releases from Thurmond Reservoir during the winter months if this severe drought persists. The document entitled *Proposed Changes to Lake Thurmond Releases to Mitigate Drought Impacts*, coauthored by GAEPD, SCDHEC, and SCDNR, and which has already been presented to you by GAEPD, describes the seasonal flow reduction agreed upon by both States.

Due to the importance of this matter, I am recommending that you implement this flow reduction plan as soon as possible.

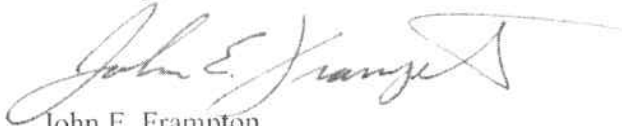
Col. Edward J. Kertis, Jr.  
October 10, 2008  
Page 2

Because the proposed release reduction from Thurmond Reservoir cannot be initiated until the Corps of Engineers complete an Environment Assessment, I am urging you to begin the Environment Assessment process immediately, and to make every effort to complete it as quickly as possible, including, if possible, the use of a 15-day public comment period. The opportunity for release reductions for October of this year has already been lost, but quick action by the Corps can allow these reductions to go into effect by November of this year.

Also, I would like to request that your staff work with representatives from both States in planning for the transition into Level 4 drought releases (outflow equals inflow) should this severe drought continue and our efforts to preserve the conservation pools prove unsuccessful.

I appreciate your serious consideration of this proposal.

Sincerely,

A handwritten signature in dark ink, appearing to read "John E. Frampton", with a stylized flourish at the end.

John E. Frampton  
Director

cc: Michael G. McShane, Chairman, SCDNR Board  
Robert W. King, Deputy Commissioner, SCDHEC  
Noel Holcombe, Director, GADNR  
Carol Couch, Director, GAEPD  
Steve de Kozlowski, Interim Deputy Director, SCDNR-LWC  
Bob Perry, Director, Office of Environmental Programs, SCDNR

# Upstate Forever

Promoting Sensible Growth and  
Protecting Special Places in the Upstate

October 24, 2008

Mr. William Bailey  
US Army Corps of Engineers  
Savannah District  
Mobile/Savannah Planning Center  
PO Box 889  
Savannah, GA 31402-0889

Re: Draft Environmental Assessment and Draft Finding of No Significant Impact for a temporary deviation to the US Army Corps of Engineers' Savannah River Basin Drought Contingency Plan

Dear Mr. Bailey:

Upstate Forever respectfully submits its comments and views on the draft environmental assessment of the temporary deviation from the Savannah River Basin Drought Contingency Plan ("the assessment"). We are a nonprofit organization working on conservation, water quality and sustainable development issues in the Upstate region of South Carolina. We have over 3,300 members, many of whom work, live or recreate in the Savannah River Basin ("the Basin"). One of our three major areas of focus is our Clean Air and Water Program, which includes a significant emphasis on improving the quality and maintaining the quantity of the water within our region's lakes and rivers.

The assessment indicates that the proposed temporary deviation from the Drought Contingency Plan will not likely adversely impact sensitive species or users within the Basin. Because of the low likelihood of adverse impacts resulting from the proposed action, the temporary nature of the proposed flow reduction, and the fact that the Basin currently operates under a significantly altered hydrological regime, Upstate Forever does not object to the temporary reduction in flow from Lake Thurmond to 3,100 cubic feet per second (cfs) between November 1, 2008, and February 28, 2009.

While we do not object to the proposed temporary deviation from the Drought Contingency Plan, we have serious concerns regarding the details of the assessment and the implementation strategy for the temporary flow reduction that we believe should be addressed before the Army Corps of Engineers (the Corps) proceeds with the proposed action.

We respectfully request that the Corps not deviate from the Savannah River Basin Drought Contingency Plan until the following concerns are addressed:

P.O. Box 2308 ♦ Greenville, SC 29602

Phone: (864) 250-0500 ♦ Fax: (864) 250-0788 ♦ E-mail: [info@upstateforever.org](mailto:info@upstateforever.org)

- 1. The Corps should indicate the specific agency and department/bureau that is responsible for each action outlined in the assessment, including the request that the Corps restore the flow to 3,600 cfs.**

Throughout the assessment, individual actions are described as being completed by "the State" of South Carolina or Georgia, including requests that flows return to 3,600 cfs. However, the assessment does not say what agency or representative of the state must complete these actions or make the request for flow adjustments. For greater transparency and efficiency of the management regime, the Corps should specify the department or bureau within Georgia Department of Natural Resources, South Carolina Department of Natural Resources, South Carolina Department of Health and Environmental Control, or other appropriate agency that is responsible for each action described in the assessment.

- 2. The Corps should specify a time limit for reporting violations of the monitoring parameters and recommending adjustments to the Thurmond release levels.**

As outlined in the assessment, the states will coordinate monitoring of water quality parameters and performance targets. Should a parameter exceed one of the acceptable levels identified in the assessment, the monitoring organization will report the violation to the State, the State will review the information and discuss the results with the other state, and the State will make recommendations to the Savannah District for appropriate adjustments to the Thurmond release levels.

Without a timeline stipulated in the assessment, actions may proceed slower than necessary and cause needless harm to downstream users or ecosystems. The Corps should stipulate a realistic time limit for each agency or department's actions when a water quality parameter is exceeded.

- 3. The Corps should ensure that the City of Augusta fully supports the temporary reduction in flow and will allow sufficient flow of water into the Augusta Shoals.**

It is our understanding that the City of Augusta has not yet signed the settlement agreement concerning the relicensing the Augusta Canal Project (FERC Project No. 11810) that would require a release of 1,500 cfs during most of the year into the Augusta Shoals when the release from Lake Thurmond is 3,600 cfs or less. The draft agreement also requires that the release to the shoals would increase to 1,800 cfs from February to May.

The Augusta Shoals harbors unique assemblages of plant and fish species including the rare Atlantic sturgeon and federally endangered shortnose sturgeon, the endangered robust redhorse, and the endangered shoals spider lily. Maintaining adequate flows in the Augusta Shoals is critical to the survival of these species during the temporary deviation and is key to the success of the temporary deviation from the Drought Contingency Plan and the possibility of future adaptive management measures in the Basin.

The Corps should not allow the temporary deviation from the Drought Contingency Plan to occur until appropriate assurances are in place that the City of Augusta will release at least 1,500 cfs into the Augusta Shoals from November 1, 2008, to January 31, 2009, and 1,800 cfs from February 1 through February 28, 2009.

**4. The Corps should describe the response if cool-season precipitation replenishes the conservation pools at rates slower than anticipated.**

The assessment operates under the assumption that precipitation from November to March will occur as modeled, but wide fluctuations in actual precipitation as compared to modeled precipitation have been observed over the last few years. In addition, the finding of no significant impact for many of the potential impacts evaluated in the assessment was based on the temporary flow reduction occurring during the cool-weather season. Before implementing the temporary flow reduction, the Corps should describe the steps that will occur if the rate of replenishment occurs slower than anticipated.

**Conclusion**

Upstate Forever believes that any changes to release levels in the Savannah River Basin that would occur after February 28, 2009, should require a far more detailed examination of all potential adverse impacts to users and ecosystems within the Basin than this assessment currently provides.

In the last 10 years, the Basin has experienced two new droughts-of-record and may see these precipitation patterns persist well into the future. The current Drought Contingency Plan for the Basin, therefore, should be reexamined in the next two years through a detailed environmental impact statement (EIS) that examines the long-term precipitation predictions and potential impacts of various management scenarios to users and ecosystems across the entire Basin. An EIS-based revision of the Drought Contingency Plan is preferable to frequent, albeit temporary, adjustments to the plan as this approach would provide an opportunity to reexamine the long-term management of all water flow requirements in the Basin rather than temporary flow requirements at individual release points.

Thank you for considering our comments. Please do not hesitate to contact me if you have any questions or need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Tynan', is written over a horizontal line.

UPSTATE FOREVER

By: John Tynan  
Rural Waters Project Manager





standard textile  
Uncommon Ideas. Smart Solutions.

October 27, 2008

VIA ELECTRONIC MAIL AND U.S. MAIL

U.S. Army Corps of Engineers, Savannah District  
Mobile/Savannah Planning Center  
Attention: Mr. William Bailey  
P.O. Box 889  
Savannah, GA 31402-0889

Re: Draft Environmental Assessment and Finding of No Significant Impact  
Temporary Deviation Drought Contingency Plan  
Savannah River Basin  
Standard Textile Augusta – Comments to Draft EA and FONSI

Dear Mr. Bailey:

These comments are filed on behalf of Standard Textile Augusta, Inc. ("Standard Textile"), which operates the "King Mill" on the Augusta Canal. The King Mill is one of the last remaining operating textile mills in Augusta, Georgia. We are a significant employer in Georgia, employing over 100 associates, with a total annual payroll well in excess of \$2,000,000, plus taxes and healthcare benefits provided to the associates and paid into the local community. In these economic times, the textile manufacturing industry operates on very tight economic margins and any negative impact to this margin can threaten the continued economic viability of this operation.

Standard Textile is submitting comments as the Draft Environmental Assessment and Finding of No Significant Impact ("EA") issued on October 16, 2008 fails to take these drastic impacts into consideration under the EA. In summary, our concerns include the following:

- The proposed plan threatens the financial viability of an ongoing business in the City of Augusta, by potentially eliminating the plant's source of power.
- The proposed plan ignores the potential economic impact on the associates of King Mill.

World Headquarters  
One Knollcrest Drive  
Cincinnati, OH 45237

513.761.9255  
800.999.0400  
513.761.0467  
[www.standardtextile.com](http://www.standardtextile.com)

- The proposed plan would have an adverse impact on the environment because it would require the plant to replace clean hydroelectric power with purchased power made from coal or other hydrocarbon plants.
- The Corps failed to involve affected parties in its consideration of these impacts.
- The Corps provided insufficient time for the potential adverse impacts to be researched and for the public to comment on the proposal.
- The Corps failed to undertake an appropriate analysis of the potential environmental or economic impacts of its proposal.

**Comments to EA:**

- **An Environmental Impact Statement should be prepared for this Federal Action as it will have Significant Environmental Impacts.**

Corps of Engineers National Environmental Policy Act regulations provide that an Environmental Impact Statement ("EIS") is required for proposed major changes in the operation and/or maintenance of completed projects. 33 C.F.R. § 230.6. A District Commander may consider the use of an environmental assessment on this type of action only if early studies and coordination show that a particular action is not likely to have "a significant impact on the quality of the human environment." An EIS is required as a result of the significant socioeconomic impacts on the human environment as a result of the potential loss of jobs associated with the lack of water delivered to the King Mill as well as other environmental concerns, including impacts on air quality. In addition, the EA fails to consider historical and cultural impacts on the Augusta Canal, which is listed on the National Register of Historic Places, designated as a National Historic Landmark, a Regionally Important Resource in the State of Georgia and a National Heritage Area by the United States Congress.

As described in the EA, the King Mill requires 880 cfs of water from the Augusta Canal to generate power for operations of the King Mill. The King Mill is powered by dual hydroelectric generators, which results in a significant reduction in air emissions in the Augusta area. The EA recognizes that if water flowing to the Augusta Canal is dedicated to the Savannah River shoals, there will be insufficient water left for all users. Specifically, after the water is diverted to the City's turbines, along with water drawn from the Augusta Canal for treatment, there would be less than 300 cfs to go through the rest of the Augusta Canal. Although the EA states that "the hydropower operations of the 'mills' will be impacted," the EA then states that, as the mills are connected to the power grid, alternative power is available, obviously concluding, without any additional

information, that lack of water to the mill is not a significant concern. Further, the EA does not address impacts to air quality that may be caused if the King Mill operated utilizing conventional power sources.

The EA fails to address how the King Mill will fund the alternative power sources. Indeed, none of the agencies involved in this process ever contacted Standard Textile prior to issuing the EA to explore the potential cost or implications to the company of utilizing an alternative source of power. One of the reasons that the King Mill has continued to operate in Augusta when most textile operations have moved offshore, is the ready source of hydropower that allows the King Mill to operate at a much lower cost than if power had to be obtained from the power grid. Standard Textile estimates that the daily cost of not being able to generate power is \$2,800, resulting in an additional monthly cost of \$84,000 if King Mill is denied access to hydropower. Simply put, the imposition of this cost on the King Mill operations would threaten the continued economic viability of this plant.

The original proposal prepared by the South Carolina Department of Health and Environmental Control, the South Carolina Department of Natural Resources and the Georgia Environmental Protection Division also acknowledged the impact on Augusta Canal hydropower operations, stating that “[d]iscussions will need to occur with the mills to determine their abilities to operate at the 3100 cfs and to use, if necessary, power from the grid during low flow periods.” See Low Flow (Real Time) Management Plan for Emergency Drought Response in the Savannah River Basin at Section D.1.c. Standard Textile was never contacted prior to issuance of the EA to discuss the significant impacts on the Mill through reduction of flows through the Augusta Canal. As a result, it does not appear, despite assurances that the Company would be contacted, that the Corps of Engineers had adequate information to support its decision to only perform an Environmental Assessment and it is clear that the Finding of No Significant Impact cannot be supported.

- **Fifteen Days is an Insufficient Time for Public Comments in Response to the Environmental Assessment**

The Corps of Engineers released the EA for public comment on October 16, 2008 with comments due on or before October 27, 2008, thus only allowing a very short period for public comments. In addition, the plan will be implemented three days later on November 1, 2008. Eleven days is an insufficient period of time for the affected public to analyze and provide substantive comments on the EA and, further, four days is an

Mr. William Bailey  
Page 4  
October 27, 2008

insufficient period for the Corps of Engineers to review and analyze comments, thus supporting the conclusion that implementation of the plan is a *fait accompli* and the request for public comments is merely a ministerial act. As a result, it does not appear that the public comment period is consistent with the requirements of the National Environmental Protection Act that requires involvement of the public in the EA process. See 40 C.F.R. 1501.4.

In conclusion, Standard Textile appreciates the significant issues presented by the drought and the balancing of concerns that must be weighed. However, we also believe that it is critical that all concerns and potential effects be weighed carefully. Standard Textile does not believe that all such effects have been weighed to reach the conclusion of "No Significant Impact." We request that the proposed plan be set aside until adequate consideration of the potential economic and environmental concerns have been analyzed. Upon completion of an appropriate study with full and open involvement of all parties who are potentially impacted, sufficient time should then be provided for public comment and discussion.

Sincerely yours,

STANDARD TEXTILE

A handwritten signature in cursive script, reading "Walter E. Spiegel". The signature is written in dark ink and is positioned above the printed name and title.

Walter E. Spiegel  
Vice President and General Counsel



## UTILITIES DEPARTMENT

Clifford A. Goins  
Interim Director

October 22, 2008

VIA E-MAIL  
[William.g.bailey@usace.army.mil](mailto:William.g.bailey@usace.army.mil)  
AND REGULAR MAIL

U.S. Army Corps of Engineers  
Savannah District  
Mobile/Savannah Planning Center  
P. O. Box 889  
Savannah, Georgia 31402-0889

RE: Draft Environmental Assessment and Finding No Significant Impact;  
Temporary Deviation Drought Contingency Plan, Savannah River Basin

Dear Colonel Kertis:

Augusta submits the following comments concerning the above referenced draft Environmental Assessment. First, the proposed changes in flows requested by the Georgia Department of Natural Resources, South Carolina Department of Health & Environmental Control, and the South Carolina Department of Natural Resources, as included in Appendix B to the draft EA, contain a number of erroneous statements concerning Augusta's operation of the canal and its ability to control the amount of water in the Shoals.

### **Flow Conditions:**

These erroneous statements are carried forward in several places in the draft EA, and in particular on page 50, wherein it is stated:

*"Diversions into the Augusta Canal are managed by the City of Augusta to maintain a minimum of 1,500 cfs (1,500 cfs May through January and 1,800 cfs otherwise) through the Shoals. Three electronically controllable gates, operated by the City of Augusta, allow for instantaneous changes of flow to the Canal, should a management target be approached."*

By way of background, Augusta has pending a license application with the Federal Energy Regulatory Commission (FERC) which has not been formally approved by the Augusta-Richmond County Commission, pending resolution of an application for a South Carolina 401 Certification and resolution of appeals with regard to the Georgia 401 Certification. However,

Augusta Utilities Administration  
360 Bay Street - Suite 180 - Augusta, GA 30901  
(706) 312-4154 - Fax (706) 312-4123  
[WWW.AUGUSTAGA.GOV](http://WWW.AUGUSTAGA.GOV)

for purposes of attempting to comply with the Corps' request reserving water for the Shoals, Augusta commits to the methodology set forth in the proposed Settlement Agreement for determining the Aquatic Base Flow and reserving for the Shoals those amounts set forth in Page Section 4.3 of the Settlement Agreement for the respective periods and tiers set forth therein (attached as Augusta Appendix A). It is also important to recognize, however, that the Settlement Agreement anticipated future efforts by Augusta following issuance of the license in order to implement the various terms of the Settlement Agreement, including the Aquatic Base Flow reservations set forth in Article 4.

Thus, there is no infrastructure presently available for measuring the flows in the Augusta Shoals or the Augusta Canal. The USGS has determined that their previous measurement at the Augusta Dam was inaccurate at flows below 5000 cfs. The previous gauging of canal slope by the USGS was discontinued over five years ago. A new area/velocity flow gauge in the Augusta Canal has been installed by the USGS with capital costs borne by Augusta. However, that gauge has not yet been calibrated. Under Augusta's Settlement Agreement negotiated as a part of the processing of a license from FERC, that gauge will be used, once calibrated and Augusta is under a FERC License, to control the amount of water that enters the Augusta Canal. Augusta is working with the USGS to render the gauge useful in determining the flow in the Augusta Canal.

The Augusta Canal operates on a simple concept: whatever water is let into the Canal, must be let out of the Canal at constant rates. The canal operation is a 24/7/365 days-a-year operation. The canal water surface slopes from the Diversion Dam to the 13<sup>th</sup> Street Gates (the end of the first level). The elevation of the top of the dam is 157.2 ft (mean sea level). The normal water elevation at the 13<sup>th</sup> Street Gates is 153.5'. In order to keep the Canal from running over its banks downtown, water must exit the canal at the same rate it is filled, otherwise flooding is likely to occur. The sum of the various uses of water in the canal must equal the water allowed in through the Head gates.

Augusta does not have three electronically controllable gates as stated on page 51 of the Draft EA and on page 9 of the state agencies' request for proposed changes (Corps' Appendix B). As part of the implementation plan, once a FERC a license consistent with the Settlement Agreement is proffered and accepted by Augusta, Augusta proposes to:

- Determine the amount of water coming to its dam based on COE declarations with adjustment for additional inflow between Thurmond and the Augusta Diversion Dam.
- Reserve a fixed amount of flow that is to stay in the river Shoals.
- Determine the demands for water from Canal Users that can be met with the available water.





- Set its Headgates to allow the demand that can be met to enter the canal.
- Any excess would also flow through the Shoals.

Augusta cannot make instantaneous changes to the canal flow. All instantaneous changes, if any, occur in the Shoals. The water coming to the Augusta Diversion Dam is the water released by the upstream Steven's Creek Hydroelectric Project (SCHP) operated by the South Carolina Electric and Gas Company (SCE&G). They have the very difficult task of re-regulating the discharges from Thurmond to a constant, even flow equal to the 24-hour average discharge from JST. However, JST does not release a constant 3600 cfs. They release the total amount of water for any given day in a very short time. That amount currently averages 3600 cfs over a 24-hour period. This makes it difficult for the SCHP to provide a constant flow to the Augusta Diversion Dam. The Settlement Agreement does not envision the maintenance of instantaneous flows in the Shoals, nor does Augusta have control of the water reaching its Diversion Dam.

Augusta can not therefore provide any minimum flow in the Shoals. It can simply reserve flows consistent with Article 4 of the Settlement Agreement and the provided margin of error, but this margin of error process applies only to Tier 1 flows, not flows less than 5400 cfs. As a result, Augusta has committed in Section 5.3 of the Settlement Agreement, upon issuance and acceptance of a FERC license, to provide a notch or other similar structure designed to provide a minimum flow of approximately 1000 cfs flow over or through the Diversion Dam, including leakage. However, that notch is not presently in existence.

Augusta recognizes that the Corps has established a target of 1500 cfs (1,500 cfs May through January and 1,800 cfs otherwise) through the Shoals, and subject to the limitations set forth above for implementation of the various aspects of the Settlement Agreement, Augusta will use its best efforts to meet the terms for flows as set forth therein, including the higher flows during the month of February as set forth in the respective tiers.

**Additional Comments:**

Augusta makes the following additional comments:

Page 20, second paragraph incorrectly states: "*after 1846, the Augusta Diversion Dam acted as a barrier to inland migration of diadromous species*".

The 1846 diversion did not extend to the South Carolina banks. It was after 1875, with the construction of the present diversion dam, that fish movement was impeded. By 1886, under

direction of the U. S. Fisheries Service, Augusta constructed the existing fish ladder designed by the Director of the Fisheries Service, Mr. Marshall (Col Marshall, VMI). That ladder is still in existence; however, its effectiveness has been in doubt for a long time.

**Page 20**, Third paragraph incorrectly implies that sturgeons *can pass the NSBL&D during flows in excess of 16,000 cfs or through the operation of the lock.*

This is not correct since sturgeons are bottom dwellers. The 10 foot sill at the base of the NSBL&D prevents them from passing the NSBL&D even during periods of high flows.

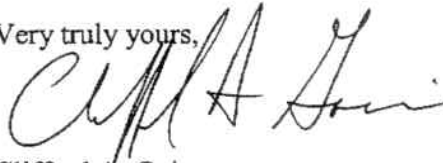
**Page 31**, The table on this page indicates: *Augusta as the responsible party to monitor the flow in the Shoals with a target of 1500 cfs.*

See discussion above concerning Flow Conditions.

**Page 43**, indicates: *"The Corps anticipates that the City (Augusta) will fulfill its commitment and allow sufficient flow to pass over the Shoals so as not to extirpate species of concern from this area."*

The right to operate the Augusta Canal and its existing Diversion Dam were granted by the State of Georgia in 1875 and continues to this day. The only condition placed upon it was the construction of the fish ladder that was completed in 1886. As a steward of its resources, Augusta will operate the Augusta Canal in a responsible manner consistent with the public's best interest.

Very truly yours,



Clifford A. Goins

CAG/mr

cc: Mayor Deke Copenhaver  
Mr. Fred Russell, City Administrator  
Ms. Carol A. Couch, Ph.D.  
Mr. Jeff Larson  
Mr. John E. Frampton  
Mr. Ed Duncan  
Mr. Dayton Sherrouse

**SETTLEMENT AGREEMENT**  
**CONCERNING THE LICENSING OF**  
**THE AUGUSTA CANAL PROJECT**  
**FERC PROJECT NO. 11810**

**1. Introduction**

**1.1 Parties.** This Settlement Agreement constitutes an offer of settlement pursuant to Rule 602 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (FERC or Commission), 18 C.F.R. § 385.602, by and among Augusta, Georgia (Augusta); the Georgia Department of Natural Resources (GDNR); the South Carolina Department of Natural Resources (SCDNR); the U.S. Department of the Interior (DOI), through the U.S. Fish and Wildlife Service (FWS); and the U.S. Department of Commerce, through the National Marine Fisheries Service (NMFS or NOAA Fisheries). The above are referred to individually as “Party” or collectively as “Parties.”

**1.2 Recitals.**

**1.2.1** The Augusta Canal was constructed in approximately 1845 through 1847, pursuant to an ordinance passed by the City Council of the City of Augusta on March 15, 1845, “to provide for the construction of a Canal, for manufacturing purposes, and for the better securing an abundant supply of water for the city,” and pursuant to an Act of the General Assembly of the State of Georgia which created the Augusta Canal Company (Ga. Laws 1845, p. 138). The latter enactment was subsequently amended to convey the Canal to the City of Augusta (Ga. Laws 1849, p. 85). In 1995 the Georgia General Assembly created the consolidated political subdivision now known as Augusta, Georgia (Augusta), effective January 1, 1996, by consolidating the former governments of the City of Augusta and Richmond County (1995 Ga. Laws, p. 3648, as amended). Augusta is the successor in interest to all the rights and responsibilities of both the former City of Augusta and Richmond County, Georgia, having the powers of both a municipality and a county.

**1.2.2** Augusta owns and operates the Augusta Canal together with the diversion dam, head works and facilities therein.

**1.2.3** The Augusta Diversion Dam (ADD) is an eleven and one-half (11.5)-foot in height run-of-the-river type stonemasonry dam. Its primary function is to divert water from the Savannah River through the Canal Headgates into the Augusta Canal. The ADD is located at Savannah River Mile 207.2, approximately nine-tenths (0.9) of a mile downstream from South Carolina Electric & Gas Company’s (SCE&G’s) Stevens Creek Dam. The ADD is 1,666 feet long and extends between the Georgia and South Carolina Savannah River shores. The ADD

impounds a normal maximum surface area of 190 acres at a normal maximum elevation of 160 MSL. It has no usable storage capacity. The pool elevation and rate of flow through the impoundment are determined primarily by operations of the Stevens Creek Dam and the United States Army Corps of Engineers' (USACE's) J. Strom Thurmond Dam.

**1.2.4** The Augusta Canal roughly parallels the Savannah River, including the area known as the Augusta Shoals, for approximately 7 miles, from the Canal Headgates to the Thirteenth Street Gates. The Augusta Canal provides hydro-mechanical power to pump raw water to Augusta's Water Treatment Plant for public water supply uses. Augusta presently operates four intake structures to supply motive water and raw water to its pumping facilities. It plans to build a new intake structure a short distance upstream of the existing structures and relegate the existing intakes to historical and reserve operating modes, but the timing of such construction and operation is uncertain. The intakes are located at the Augusta Raw Water Pump Station (RWPS), approximately 3.5 miles downstream of the Canal Headgates. The hydro-mechanical facilities are not going to be licensed and are not part of or subject to this Settlement Agreement.

**1.2.5** Augusta does not generate hydroelectric power and has no plans to do so, but it provides waterpower to three hydroelectric users through the Augusta Canal. Those users are the Sibley Mill (FERC Project No. 5044), which is located approximately 5.4 miles downstream of the Canal Headgates; the King Mill (FERC Project No. 9988), approximately 5.55 miles downstream of the Canal Headgates; and the Enterprise Mill (FERC Project No. 2935), approximately 6.35 miles downstream of the Canal Headgates. The Sibley, King and Enterprise Mills are separately licensed by the FERC, and those licenses are not a part of or subject to this Settlement Agreement.

**1.2.6** The Augusta Canal is not presently licensed by the FERC. Augusta filed an application for a FERC license on January 30, 2003, and a revised license application on June 20, 2003.

## **2. Purpose and General Provisions**

**2.1 Purpose.** The purpose of this Settlement Agreement is to resolve among the Parties issues that have been or could have been raised in this licensing proceeding related to (1) the allocation of water flow between the Savannah River and the Augusta Canal, and (2) installation and operation of upstream and downstream fish passage facilities at the Augusta Canal Project.

**2.2 Settlement as Basis for License Conditions.** The Parties respectfully request the FERC to approve this Settlement Agreement and to incorporate the provisions of Section 4, Attachment 1 (Proposed License Articles for Fishways), and Attachment 2 (Augusta Declaration Flow) of this Settlement Agreement into a license

for the Augusta Canal Project, without material modification, and not to impose any conditions in a license that are inconsistent with any of the provisions of this Settlement Agreement.

**2.3 Termination of Settlement.** This Settlement Agreement shall terminate: (a) upon expiration of the new license for the Project, or (b) in accordance with Section 3.

**2.4 Modification of Settlement.** This Settlement Agreement may only be modified: (a) upon the unanimous, written consent of all Parties, or (b) in accordance with Section 3.

**2.5 Compliance with Legal Responsibilities.** Nothing in this Settlement Agreement is intended or shall be construed to affect or limit the authority of any Party to fulfill its existing contractual responsibilities or existing and future statutory and regulatory responsibilities under applicable law. Provided, by entering into this Settlement Agreement the Parties with such responsibilities represent that they believe that their responsibilities with respect to matters agreed to in this Settlement Agreement have been, are, or can be met for the purpose stated in Section 2.1 consistent with this Settlement Agreement. Provided further, nothing in this Settlement Agreement is intended to preempt or restrict the FWS or NMFS from taking future actions, consistent with federal law, as necessary to meet obligations under the Endangered Species Act.

**2.6 Modification of Recommendations.** The Parties agree that following the execution and filing of this Settlement Agreement with the FERC, to the extent that recommendations submitted by the State and Federal Agency Parties pursuant to Federal Power Act (FPA) Sections 10(a) or 10(j) are inconsistent with the terms of this Agreement, such recommendations shall be deemed to have been modified and superseded by the terms of this Settlement Agreement.

**2.7 Communications.** The Parties recognize the importance of continuing to maintain effective and timely communication protocols after the FERC license is issued and agree that such communications ought to include all critical stakeholders who have an interest in the efficient operation of the Augusta Canal. This list includes but may not be limited to Augusta, the FWS, the NMFS (NOAA Fisheries), the GDNr, the SCDNR, and other parties or agencies as needed.

### **3. Inconsistent Fishway Prescriptions or Water Quality Conditions**

**3.1** The Parties have negotiated the Proposed License Articles for Fishways at the Augusta Canal Project (Attachment 1). DOI, on behalf of the FWS, and NMFS will file with FERC modified Section 18 fishway prescriptions consistent with the fish passage provisions in Attachment 1 to this Settlement Agreement within 45 days



of the close of the comment period on the Commission's Notice of Offer of Settlement.

**3.1.1** Nothing in this Settlement Agreement is intended to prohibit the FWS or NMFS from considering any comments or information filed with FERC, or submitted to the FWS or NMFS, in response to this Settlement Agreement that directly pertain to the fish passage provisions in Attachment 1.

**3.1.2** In the event the DOI or NMFS do not file modified Section 18 fishway prescriptions consistent with the fish passage provisions of Attachment 1 in accordance with Section 3.1, Augusta may withdraw from this Settlement Agreement and/or take any other action allowed by law. Augusta will notify the other Parties of the inconsistency within 30 days of the filing of inconsistent Section 18 prescriptions.

**3.1.3** In the event the Commission issues a license that does not adopt and incorporate the FWS' or NMFS' modified Section 18 fishway prescriptions as described in Section 3.1, the FWS or NMFS may withdraw from this Settlement Agreement and/or take any action allowed by law. In such circumstances, the FWS or NMFS will notify the other Parties of its intention within 30 days of license issuance.

**3.2** In the event that a final Clean Water Act Section 401 Water Quality Certification is issued by either Georgia or South Carolina which, after the conclusion of any appeals proceedings, incorporates any conditions that are not consistent with Section 4 of this Settlement Agreement, any Party may withdraw from this Settlement Agreement and/or take any other action allowed by law. Any such Party will notify the other Parties of the inconsistency within 30 days of the subject Water Quality Certificate becoming final.

**3.3** In the event any Party withdraws from this Settlement Agreement pursuant to Section 3.1.2, 3.1.3, or 3.2, any other Party may withdraw and/or take any action allowed by law. Any Party who chooses to withdraw from this Settlement Agreement pursuant to this Section will so notify the other Parties within 30 days of a notice of withdrawal.

#### **4. Flow Conditions<sup>1</sup>**

**4.1** The Parties agree that Aquatic Base Flow reservations for the Augusta Shoals will be as stated in Section 4.3. All numbers are in cubic feet per second (cfs). The first column identifies the levels of inflows to the ADD, which are sometimes described as “Tier 1” (ADD inflows greater than 5,400 cfs), “Tier 2” (ADD inflows between 4,500 and 5,399 cfs), “Tier 3” (ADD inflows between 3,600 and 4,499 cfs), and “Tier 4” (ADD inflows less than 3,600 cfs).

**4.2** Inflows to the ADD are described as the “Augusta Declaration.” The Augusta Declaration will be calculated as follows:

- (1) Acquire daily SEPA Declaration for the Thurmond Dam.
- (2) Determine additional inflow between the Thurmond Dam and the ADD for same date as SEPA Declaration. The agreed method of calculating additional inflow is described in Attachment 2, which is incorporated into and made a part of this Settlement Agreement. The Parties will agree to standardize the time of day to read the United States Geological Survey (USGS) Modoc gauge (as described in Attachment 2) for the purpose of calculating inflows.
- (3) The sum of the daily SEPA Declaration and additional inflow from Step (2) equals the daily Augusta Declaration.

#### **4.3 Agreed Aquatic Base Flows:**

	<u>FEB/MAR</u>	<u>APR</u>	<u>MAY 1-15</u>	<u>MAY 16-31</u>	<u>JUNE- JAN</u>
Tier 1 $\geq 5400$	3300	3300	2500	1900	1900
Tier 2 4500-5399	2300	2200	1800	1800	1500
Tier 3 3600-4499	2000	2000	1500	1500	1500
Tier 4 $< 3600$	1800	1800	1500	1500	1500

**4.4** The difference between the Augusta Declaration and the agreed Aquatic Base Flow for each day will be the amount that may be diverted to the Augusta Canal, as needed, sometimes referred to as the daily allowable diversion flow rate. For

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<sup>1</sup> The terms “reserve,” “reserved,” “Aquatic Base Flow reservations,” or other similar terms, in this Section 4 and elsewhere in this Settlement Agreement, are used in their ordinary sense and without reference to the doctrine of “reserved water rights” under the western states law of prior appropriation. The meaning attached to such terms under the law of prior appropriation does not apply to those terms as used in this Settlement Agreement.

purposes of determining compliance, the quantity of water that will flow in the Canal shall not exceed 105% of the daily allowable diversion flow rate.

**4.5** The City will make one flow setting for the Canal Headgates on a daily basis, based upon the daily Augusta Declaration. There will be no adjustments to the canal flow setting during such 24 hour period, except for compliance purposes or an emergency.

**4.6** The flows stated in Section 4.3 are not minimum flows but base flows. This means that based on a 40 year historical average and as projected over the expected FERC license term, the flows will be greater than stated, especially at the Tier 1 Level, a majority of the time. This is because total flow in the Savannah River will often exceed the sum of the allocations for the Canal and Shoals, and any surplus water will flow into the Shoals.

**4.7** Between May 16 and the following January 31 of each year, the specified Aquatic Base Flows will be reserved at least 90% of the time under Tier 1 ( $\geq 5400$  cfs) flow conditions, based on a 60-day rolling period. Stated otherwise, the Aquatic Base Flow reservation will be satisfied at least 54 days of any consecutive 60-day period (subject to the 5% "margin of error" condition set out in Section 4.4, which states that for purposes of determining compliance the quantity of water that will flow in the Canal shall not exceed 105% of the daily allowable diversion flow rate). During the balance (no more than 10% or 6 days) of each consecutive 60-day period, Augusta will reserve a daily average flow at not more than 500 cfs below the Aquatic Base Flow level.

**4.8** Between February 1 and May 15 of each year, the specified Aquatic Base Flows will be reserved at least 95% of the time under Tier 1 ( $\geq 5400$  cfs) flow conditions, based on a 60-day rolling period. Stated otherwise, the Aquatic Base Flow reservation will be satisfied at least 57 days of any consecutive 60-day period (subject to the 5% "margin of error" condition set out in Section 4.4, which states that for purposes of determining compliance the quantity of water that will flow in the Canal shall not exceed 105% of the daily allowable diversion flow rate). During the balance (no more than 5% or 3 days) of each consecutive 60-day period, Augusta will reserve a daily average flow at not more than 500 cfs below the Aquatic Base Flow level.

**4.9** The Aquatic Base Flow will be met 90% of the time in a running count of any 60-day period year-round. In addition, the Aquatic Base Flow will be met 95% of the time in a running count for any 60-day period that begins on or after February 1 or ends on or before May 15. In other words, the specified Aquatic Base Flows will be reserved at least 90% of the time under Tier 1 ( $\geq 5400$  cfs) flow conditions for the full 60-day rolling period year-round (subject to the 5% "margin of error" condition set out in Section 4.4, which states that for purposes of determining compliance the quantity of water that will flow in the Canal shall not exceed 105% of the daily

allowable diversion flow rate). The deviation will be not more than 6 days during any 60-day period year-round, and in addition, will be not more than 3 days during any 60 day period between February 1 and May 15.

**4.10** For purposes of determining compliance with either the 90%/60 day rule or the 95%/60 day rule, circumstances beyond the control of Augusta shall not be counted as a violation of Augusta's license, including but not limited to the following: downstream users violating anticipated allocations, downstream users' violations of their license conditions, catastrophic failure of the gates or canal banks, or operational emergencies. Further, periods of canal re-watering shall not be counted in the allowed percentage deviations. The purpose of the 5%/10% deviation allowed, as provided herein, is to give Augusta operational flexibility, at its discretion, to meet the needs of the canal users. The 90%/60-day rule and the 95%/60-day rule shall apply only to Tier 1 flow conditions.

**4.11** Augusta will, at its option, either:

a. Within 90 days following the execution of this Settlement Agreement, submit the procedure for determining the "Augusta Declaration," described in Section 4.2 and Attachment 2 hereof, to an independent third party agreeable to all Parties to verify that the procedure is a reasonable method to determine how much water would be available to meet the needs of the Augusta Canal after first reserving the Aquatic Base Flows (averages over a twenty-four hour period) indicated in Section 4.3. The independent third party will be a qualified hydrologist. The hydrologist will be asked to render an opinion, based on the historic record, on the likelihood that the Aquatic Base Flow or larger quantity of water will reach the Shoals on a daily average basis. In the event such verification can not be provided for any reason, Augusta agrees to implement option (b) below; or

b. Upon acceptance of FERC license, place at its expense into the pool above the ADD a device for monitoring the pool daily average stage in that section of the River.

**4.12** Augusta will work with the USACE and/or the USGS to provide appropriate gauging equipment in the Canal. In so doing, Augusta will consult with the FWS, NMFS, GDNR and SCDNR. Augusta will not monitor the flow in the Shoals, nor will there be any instantaneous, or continuous, minimum flow condition for the Shoals, except for the 1000 cfs provided in Section 5.3 and Attachment 1 to this Settlement Agreement.

**4.13** Should Augusta's demands for water from the Canal exceed 4,600 cfs during the term of the expected FERC license, Augusta agrees to submit any proposed future increase in Canal flows and an evaluation of any impacts such flows would have on the Shoals to a technical committee composed of representatives of the GDNR, SCDNR, and Augusta Utilities Department, which committee shall make a

recommendation to FERC regarding any such proposed increase in Canal flows. The technical committee shall notify the FWS and NMFS regarding any proposed increase in Canal flows and shall keep the FWS and NMFS advised of discussions regarding same. The technical committee shall provide the FWS and NMFS with a copy of any proposed increase in Canal flows and shall allow the FWS and NMFS to review and provide written comments. Any comments by the FWS and NMFS shall be forwarded to FERC by the technical committee as a part of any report from the committee. Any Party may also comment separately to FERC regarding such increase, but it is the intent of the Parties not to reopen the FERC license (this clause is applicable only to this Section 4.13). FERC shall make the final decision regarding such increases in Canal flows and any impacts those flows would have on the Shoals.

## **5. Fish Passage**

**5.1** The Parties agree that upstream fish passage will be as described by the FWS and NMFS in the Modified Prescriptions for Fishways dated August 4, 2005, and August 24, 2005, with attraction flows supplied by either a permanent notch, Obermeyer type inflatable crest gates, or other similar structure, as specified in Section 5.3 herein, waiving the conditions that Augusta expressed in its license application. These requirements have been incorporated into Attachment 1 (Proposed License Articles for Fish Passage). Augusta shall install upstream fish passage in accordance with the provisions of Attachment 1.

**5.2** The Parties agree that downstream fish passage shall be fully operational within three years of the FWS or NMFS notifying the licensee that shortnose sturgeon have been documented to successfully pass above the Augusta Diversion Dam through the upstream fishway. These requirements have been incorporated into Attachment 1 (Proposed License Articles for Fish Passage). Augusta shall install downstream fish passage in accordance with the provisions of Attachment 1.

**5.3** The Parties agree that until such time as upstream fish passage facilities are constructed at the ADD, Augusta will provide a temporary notch or other similar structure (within one year of the issuance of a FERC license) using existing facilities (e.g., stoplogs). The temporary notch or other similar structure will be sized to provide a minimum flow of approximately 1,000 cfs over or through the Dam at all times, including leakage (which includes leakage from any part of the Dam, including but not limited to flow through the existing fish ladder). When fish passage facilities are constructed at the Dam, Augusta will provide either a permanent notch in the Dam adjacent to the new fishway, which will be incorporated into the new fishway design, or Obermeyer type inflatable crest gates, or other similar structure, either of which will be sized to provide a minimum flow of approximately 1,000 cfs over or through the Dam at all times, including leakage. These requirements have been incorporated into Attachment 1 (Proposed License Articles for Fish Passage). Augusta shall install the temporary notch or other similar structure and either the permanent notch,



Obermeyer type inflatable crest gates, or other similar structure in accordance with the provisions of Attachment 1.

## **6. Miscellaneous Provisions**

**6.1** In the event this Settlement Agreement is terminated, all documents related to negotiation of this Settlement Agreement shall remain confidential and shall not be disclosed or discoverable or admissible in any forum or proceeding for any purpose to the fullest extent allowed by applicable law, including 18 C.F.R. § 385.606 (2005) (Confidentiality in Dispute Resolution Proceedings).

**6.2** The Parties entered into the negotiations and discussions leading to this Settlement Agreement with the understanding that, to the extent allowed by law, all discussions and documents relating to the development of this Settlement Agreement were and shall remain confidential. Positions advanced or discussed and documents prepared by the Parties during negotiation of this Settlement Agreement shall not be used by any Party in any manner, including admission into evidence, in connection with this Settlement Agreement or in any other proceedings related to the subject matter of this Settlement Agreement, except to the extent that disclosure may be required by law. This Section 6.2 shall survive any termination of this Settlement Agreement or transfer of the Project License pursuant to Section 8 of the FPA and shall apply to any Party that withdraws from or becomes no longer subject to this Settlement.

**6.3** This Settlement Agreement establishes no principle or precedent with regard to any issue addressed in this Settlement Agreement or with regard to any Party's participation in any other pending or future licensing proceeding. Further, no Party to this Settlement Agreement shall be deemed to have approved, accepted, agreed to, or otherwise consented to any operation or principle underlying any of the matters covered by this Settlement Agreement, except as expressly provided by this Settlement Agreement. By entering into this Settlement Agreement, no Party shall be deemed to have made any admission or waived any contention of fact or law that it did make or could have made in any FERC proceeding relating to the issuance of the license. This Section 6.3 shall survive any termination of this Settlement Agreement or transfer of the Project License pursuant to Section 8 of the FPA and shall apply to any Party that withdraws from or becomes no longer subject to this Settlement Agreement.

**6.4** The provisions of this Settlement Agreement are not severable. This Settlement Agreement is made on the understanding that each provision is in consideration of and in support of every other provision, and each provision is a necessary part of the entire Settlement Agreement.



**6. Execution of Settlement Agreement**

**6.1 Signatory Authority.** Each signatory to this Settlement Agreement represents that he or she is authorized to execute this Settlement Agreement and to legally bind the Party he or she represents, and that such Party shall be fully bound by the terms hereof upon such signature without any further act, approval, or authorization by such Party. This Agreement may be executed and delivered by facsimile. Facsimile signatures shall have the same legal effect as manual signatures.

**6.2 Signing in Counterparts.** This Settlement Agreement may be executed in any number of counterparts. Each executed counterpart shall have the same force and effect as an original instrument as if all the signatory Parties to all of the counterparts had signed the same instrument.

Executed and agreed to by the following Parties:

Augusta, Georgia

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Georgia Department of Natural Resources

By:  \_\_\_\_\_

Name: NOEL Holcomb

Title: Commissioner

Date: 7/3/2008

South Carolina Department of Natural Resources

By: 

Name: John E. Frampton

Title: Director

Date: April 30, 2008

U.S. Department of the Interior,  
through the U.S. Fish and Wildlife Service

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

U.S. Department of Commerce,  
through the National Marine Fisheries Service

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

South Carolina Department of Natural Resources

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

U.S. Department of the Interior,  
through the U.S. Fish and Wildlife Service

By: Cynthia K. Dohner

Name: Cynthia K. Dohner

Title: Acting Regional Director

Date: 31 2008

U.S. Department of Commerce,  
through the National Marine Fisheries Service

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

South Carolina Department of Natural Resources

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

U.S. Department of the Interior,  
through the U.S. Fish and Wildlife Service

By: \_\_\_\_\_

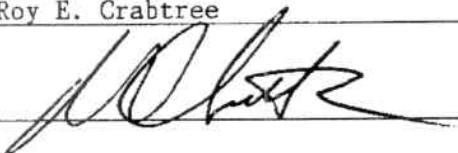
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

U.S. Department of Commerce,  
through the National Marine Fisheries Service

By: Roy E. Crabtree

Name: 

Title: Regional Administrator

Date: January 8, 2008

## Attachment 1

### PROPOSED LICENSE ARTICLES FOR FISHWAYS AT THE AUGUSTA CANAL PROJECT

#### A. General Terms and Conditions for Fishways

To ensure the timely contribution of the proposed fishway to the Savannah River fish restoration effort, the following measures are included and shall be incorporated by the licensee to ensure the effectiveness of the fishway pursuant to Section 1701(b) of the 1992 National Energy Policy Act (P.L. 102-0486, Title XVII, 106 Stat. 3008).

1. Fishways shall be constructed, operated, and maintained to provide effective (safe, timely, convenient) passage for American shad, blueback herring, striped bass, shortnose sturgeon, American eel, and robust redhorse at the licensee's expense.
2. The design population for each target species is:

<u>Target species</u>	<u>Upstream Fishway Design Populations</u>
American shad	111,000
Blueback herring	550,000
Robust redhorse	(unquantified)
Striped bass	(unquantified)
American eel	(unquantified)
Shortnose sturgeon	(unquantified)

3. Upstream fishways shall be operational during the designated migration period at river flows up to approximately 30,000 cfs.
4. The upstream fishway shall be fully operational as soon as possible but no later than three years after the date of issuance of a new license so that the benefits of passage improvements may be realized as soon as practicable. The downstream fishway shall be fully operational within three years of the FWS or NMFS notifying the licensee that shortnose sturgeon have been documented to successfully pass above the Augusta Diversion Dam through the upstream fishway. The licensee shall (1) notify and (2) obtain approval from the FWS and NMFS for any extensions of time to comply with the provisions included in this prescription for fishways. A detailed schedule and time line for all work required shall be developed in coordination with the FWS and NMFS.

5. Following installation of the respective fishway, such fishways shall be maintained and operated at the licensee's expense throughout the migration periods for the target species. The migration periods for diadromous target species are as follows:

<u>Species</u>	<u>Upstream Migration</u>	<u>Downstream Migration</u>
American shad	Feb. 1 – May 15	essentially year round
Blueback herring	Feb. 1 – May 15	essentially year round
Robust redhorse	Feb. 1 – May 15	essentially year round
Striped bass	Feb. 1 – May 15	essentially year round
American eel	Feb. 1 – May 15	unknown
Shortnose sturgeon	Feb. 1 – April 15	essentially year round

Any of these migration periods may be amended or otherwise changed during the term of the license by the FWS and NMFS in consultation with the GDNR, SCDNR and the licensee, based on experience, data, or new information.

6. The licensee shall keep the fishway in proper order and shall keep fishway areas clear of trash, logs, and material that would hinder passage. Anticipated maintenance shall be performed sufficiently before a migratory period such that fishway can be tested and inspected, and will operate effectively prior to and during the migratory periods. In consultation with the FWS, NMFS, GDNR, and SCDNR, the licensee shall develop a fishway operation and maintenance plan (O&M plan) describing the anticipated fishway operational protocols, maintenance, maintenance schedule, and contingencies. The plan, containing the consultation comments of the state resource agencies, shall be submitted to the FWS and NMFS for review and approval. Upon such approval, the Plan shall be submitted to the Commission for approval. If the licensee disagrees with any requirements or modifications imposed by the FWS and NMFS as conditions of their approval, it shall provide an explanation in its filing with the Commission.
7. The licensee shall provide FWS, NMFS, GDNR, and SCDNR personnel reasonable access to the project site and to pertinent project records for the purpose of inspecting the fishway to determine compliance with the fishway prescriptions and for general evaluation and oversight observations.
8. The licensee shall develop in consultation with, and submit for approval by, FWS and NMFS all functional and final design plans, construction schedules, and any hydraulic model or other studies for the fishways described herein. For the upstream fishway, functional design drawings will be submitted within eight months, and final design drawings will be submitted within fifteen months of license issuance. For the downstream fishway, functional design drawings must be submitted within eight months of the FWS or NMFS notifying the licensee that shortnose sturgeon have been documented to successfully pass above the



Augusta Diversion Dam through the upstream fishway, and final design drawings must be submitted within fifteen months of the FWS or NMFS notifying the licensee that shortnose sturgeon have been documented to successfully pass above the Augusta Diversion Dam through the upstream fishway.

9. The licensee shall develop plans for, and conduct fishway effectiveness evaluations in consultation with the FWS and NMFS on both upstream and downstream facilities. The plans and results of effectiveness studies shall be submitted to the NMFS, FWS, GDNR and SCDNR for review and comment prior to being filed for approval by the Commission. If the licensee disagrees with any of the comments and recommendations from the resource agencies, it shall provide an explanation in its filing with the Commission.
10. The licensee shall reserve aquatic base flows downstream of the Augusta Diversion Dam in accordance with Section 4.0 of the Settlement Agreement.

B. Upstream Fishway

1. Temporary Notch

Until such time as upstream fish passage facilities are constructed at the ADD, Augusta will provide a temporary notch or other similar structure (within one year of the issuance of a FERC license) using existing facilities (*e.g.*, stoplogs). The temporary notch or other similar structure will be sized to provide a minimum flow of approximately 1,000 cfs over or through the Dam at all times, including leakage (which includes leakage from any part of Dam, including but not limited to flow through the existing fish ladder). Licensee shall consult with the FWS and NMFS over the size and location of the temporary notch or other similar structure.

2. Fishway

To provide for the upstream passage of the target species listed above, a Vertical Slot Type Fishway is proposed on the South Carolina side of the Augusta Diversion Dam. The fishway will be constructed of concrete on a 1 on 16 slope and have approximately twenty-one pools (or the number of pools needed based on the vertical drop), each 10 ft long x 9 ft wide with baffles having an adjustable width (16" - 20") full depth slot to accommodate the passage of target species including shortnose sturgeon. The fishway baffles can be cast in place concrete or constructed of prefabricated elements bolted in place. The maximum drop per pool should be 7.5 inches. Rock substrate or similar artificial substrate material should be added to the fishway pools to create roughness and low-velocity areas to facilitate the upstream passage of juvenile American eel and other weak-swimming migrants. The fishway entrance should be 7 ft wide and extend down to the streambed to facilitate passage of bottom species and discharge up to 120 cfs attraction flow. Other features include a fish-counting station with viewing window at the upstream end of the fishway which could be expanded to include public viewing facilities, a fish trap and sampling device adjacent to the fish counting station, and either a permanent notch, Obermeyer type inflatable crest gates, or other similar structure adjacent to the new fishway to

provide a suitable fish attraction flow field for upstream passage and an avenue for downstream migrant passage and for sluicing debris. The permanent notch, Obermeyer type inflatable crest gates, or other similar structure will be adjacent to the new fishway, incorporated into the fishway design, and sized to provide a combined minimum flow of approximately 1,000 cfs over or through the Augusta Diversion Dam at all times, including leakage and flows through the new fishway. An approach channel should also be provided in the river channel below the fishway and permanent notch, Obermeyer type inflatable crest gates, or other similar structure to facilitate the attraction of upstream migrants to the South Carolina side. The fishway should be self-regulating as far as accommodating varying flow conditions, and we recommend operation up to approximately 30,000 cfs river flow.

The fishway shall incorporate the following design features, unless the design features are modified in consultation with, and the approval of, the FWS and NMFS.

Fishway Type	Vertical slot
Suggested Location	South Carolina side of dam
Pool Size	10 ft long x 9 ft wide x 5 ft normal depth
Baffle Slot Width	Adjustable 16" - 20"
Number of Pools	As needed based on the vertical drop
Drop per Pool	7.5 inches (Maximum)
Normal Flow through Slots	30 cfs at 16" slot @ 5 ft deep
Floor Slope	1 on 16
Operating Range	Up to 30, 000 cfs river flow
Fish Counting Station	In fishway exit channel with side viewing window
Fish Trap and Sampling Facility	Adjacent to fishway exit channel
Fishway Entrance	7 ft wide to channel bottom
Attraction Flow	Up to 120 cfs at fishway entrance
Attraction Flow Diffusion Chamber	90 cfs capacity, floor type with diffusion grillage and grating located in entrance channel. Maximum exit velocity = 1 fps

Trash Rack	At fishway exit – 10” wide bar spacing
Trash Boom	Floating trash boom (optional) in headpond near fishway
Notch	Located adjacent to fishway and sized to provide a combined minimum flow of 1,000 cfs over or through the Augusta Diversion Dam at all times, including leakage
Fishway approach channel	Channel approximately 3 ft deep x 12 ft wide
Miscellaneous Equipment	Safety railings, walkway grating, access ladders, rock substrate in pools

#### C. Downstream Fishways

The Services are prescribing downstream fish facilities within the Augusta Canal to minimize the entrainment of downstream migrants and provide safe and effective downstream passage. Downstream passage facilities shall include the installation of screens and bypass systems at the two proposed intakes at the Raw Water Pumping Facility. Augusta will consult with FWS and NMFS fishway engineers concerning the design of the facilities. Augusta will design new Raw Water Pumping Station intakes to be able to accommodate a bypass to the Savannah River for additional downstream passage and protection.

The licensee shall initiate development of the downstream screen and bypass facilities at the Raw Water Pumping Station upon notice from NMFS that shortnose sturgeon are passing or have passed upstream at the Augusta Diversion Dam fish passage facility. NMFS will make its determination of successful upstream shortnose sturgeon passage employing observations at the fishway counting station or other means that demonstrate upstream passage through the fishway. NMFS will promptly notify the licensee to commence development of downstream passage and protection facilities within three years from the date of notification. Upon notification, the licensee shall initiate coordination with NMFS and FWS to develop the final conceptual and functional design plans for the downstream passage facilities.

During development of the downstream passage design, an addendum to the fishway operation and maintenance plan (O&M plan) prepared in accordance with Section A.6 of this Attachment shall be prepared to address the downstream passage facilities. The O&M plan shall include a protocol for shortnose sturgeon related procedures, data collection, and reporting; coordination and consultation roles, responsibilities and contacts, and measures to minimize the potential for incidental take during normal and emergency operations.

If during the three-year design and construction period for the downstream passage facilities, or thereafter during the license term shortnose sturgeon are determined to be harmed (which includes verification of the purported harm by NMFS) by operation of the hydromechanical turbines, Augusta Canal facilities, fish passage facilities, or incidentally through other means under the control of the licensee, this take will be reported to FERC which must then initiate ESA consultation with NMFS' Protected Resources Division. The licensee shall coordinate with NMFS to develop appropriate measures to protect shortnose sturgeon. Approved construction and normal operation of the fishways prescribed by NMFS and as described in this agreement and the fishway operations and maintenance plan are anticipated to provide safe upstream and downstream passage for shortnose sturgeon and preclude fish passage-related incidental take.

## Attachment 2

### AUGUSTA DECLARATION FLOWS

#### Background

The Canal Operating Plan relies on the Augusta Declaration Flow, which is the sum of the daily SEPA declaration for Thurmond Dam and the daily tributary inflow, to allocate flows for the Augusta Canal and the Augusta Shoals. A method to estimate tributary inflow between Thurmond Dam and the ADD as part of the Canal Operating Plan (COP) is described below.

The drainage area between Thurmond Dam and the ADD is 1,006 square miles. Much of this intervening drainage area is represented by Stevens Creek, and the gauge for Stevens Creek at Modoc (USGS No. 02196000) accounts for approximately 545 square miles, or 54 percent of the total drainage area between the two dams. The streams in the Stevens Creek drainage area appear to be mostly unregulated and the watershed lies substantially in the Sumter National Forest.

The Stevens Creek gauge at Modoc is located within the watershed of interest, represents over one-half of total drainage area between Thurmond Dam and the ADD, is representative, and has an extended period of flow records (period 1941 through 1977 and 1984 through 2000, a record of 54 years). The Stevens Creek at Modoc flow data represent the best available information regarding historic tributary inflow in that area. Most importantly, daily flow data is available online and is updated each day.

#### ***Method to Estimate Tributary Inflow Using Stevens Creek at Modoc Data***

The following steps would provide daily estimates of daily tributary inflow for the intervening drainage area between Thurmond Dam and Augusta Diversion Dam to be used in the calculation of the Augusta Declaration Flow.

1. Obtain the most recent daily Stevens Creek at Modoc (USGS No. 02196000) flow estimate once each morning from the USGS website at:

[http://waterdata.usgs.gov/sc/nwis/dv/?site\\_no=02196000&PARAMeter\\_cd=00060,00065](http://waterdata.usgs.gov/sc/nwis/dv/?site_no=02196000&PARAMeter_cd=00060,00065) or other then current Internet site

2. Multiply the daily Stevens Creek flow by 1.85 (ratio of the drainage areas:  $1,006/545 = 1.85$ ) to account for the entire drainage area between Thurmond Dam and the ADD, resulting in "total estimated tributary inflow."
3. If a daily flow for that day is not available from the USGS website for the morning in question, then the most recent flow estimate from the previous day will be obtained and used as a substitute. If no data is available from the day in question or the previous day

or if the website is temporarily unavailable, the daily total estimated tributary inflow would be determined by using the calculated flow duration table for the area between Thurmond Dam and the ADD (Table 1) depending on the month as follows:

- If the USACE is not in a declared drought or if the USACE is in declared drought level 1, then the 50 percentile flow from Table 1 will be used
- If the USACE is in declared drought level 2, then the 75 percentile flow from Table 1 will be used
- If the USACE is in declared drought level 3, then the 90 percentile flow from Table 1 will be used

Declared drought levels 1, 2, and 3 are defined in the USACE's Savannah River Basin Drought Contingency Plan (2006).

4. Add the total estimated tributary inflow to the SEPA declaration on a daily basis to compute the Augusta Declaration Flow.



Table 1. Estimated flow duration statistics for the drainage area between Thurmond Dam and the ADD

Percent of time exceeded	Stream Flow												
	Annual	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0%	48,470	35,890	29,600	35,890	39,035	24,975	26,270	9,639	48,470	12,599	40,330	29,785	36,630
5%	3,053	6,050	6,618	8,479	4,072	1,667	1,212	1,419	878	511	951	1,445	2,757
10%	1,478	3,016	3,978	4,138	2,074	912	526	650	453	285	365	509	1,279
15%	962	1,925	2,553	2,629	1,385	601	354	416	316	198	215	313	827
20%	703	1,378	1,833	1,998	1,058	461	276	289	229	148	148	241	614
25%	544	1,104	1,471	1,526	864	384	217	224	179	120	113	196	481
30%	427	921	1,216	1,264	715	329	185	185	141	104	93	163	398
35%	348	779	1,036	1,079	627	286	161	148	118	89	80	135	335
40%	285	675	873	936	542	251	141	125	100	76	63	109	289
45%	229	592	765	825	483	224	130	105	85	65	56	91	242
50%	189	522	679	734	428	204	115	93	72	56	46	74	192
55%	154	447	586	657	385	187	102	78	61	49	41	63	157
60%	126	390	516	588	353	168	93	67	54	43	37	56	130
65%	102	336	448	539	318	150	83	59	46	37	32	50	109
70%	81	279	392	483	287	133	74	52	39	30	28	44	89
75%	63	233	350	426	261	117	65	44	33	26	24	41	76
80%	50	192	292	381	233	102	56	37	26	20	20	33	61
85%	39	152	244	333	205	83	44	30	20	16	16	28	52
90%	28	123	211	285	172	68	35	24	16	11	10	18	43
95%	16	90	163	214	139	52	26	18	11	7	6	10	31
100%	0	20	50	87	70	12	7	2	2	0	0	0	9

Notes:

Based on flow data for Stevens Creek at Modoc, SC (USGS No. 02196000) for 1941 to 1977 and 1984 to 2000.

- a Median flow, flow equaled or exceeded 50% of the time on an annual or monthly basis.
- b 75 percentile flow, flow equaled or exceeded 75% of the time on an annual or monthly basis.
- c 90 percentile flow, flow equaled or exceeded 90% of the time on an annual or monthly basis.

October 23, 2008

**VIA E-Mail**  
**William.g.bailey@usace.army.mil**  
**AND REGULAR MAIL**

Mr. William G. Bailey  
U. S. Army Corps of Engineers  
P. O. Box 889  
Savannah, GA 31402-0889

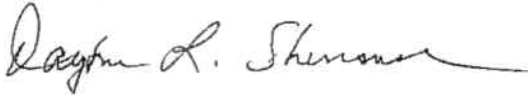
RE: Draft Environmental Assessment and Finding of No Significant Impact.  
Temporary Deviation, Drought Contingency Plan, Savannah River Basin.

Dear Mr. Bailey:

The Augusta Canal Authority submits the attached comments concerning the above referenced Draft Environmental Assessment.

Should you have any questions or need additional information please call me.

Sincerely yours,



Dayton L. Sherrouse, AICP  
Executive Director

Dayton L. Sherrouse, AICP  
Executive Director

**Board Members**

Jeanie C. Allen  
Charles Bullock  
Jo Granberry  
Ben Harrison  
Earnestine Howard  
Mary K. Martin  
Thomas H. Robertson  
N. Turner Simkins  
Fran Felton Stewart  
Michael Thames  
Jack Vanellison  
Robert S. Woodhurst, III



Office  
706.823.0440

Fax  
706.823.1045

E-Mail  
[sherrouse@augustacanal.com](mailto:sherrouse@augustacanal.com)

Internet  
[www.augustacanal.com](http://www.augustacanal.com)

Address  
1450 Greene St  
Suite 400 - 30901  
Post Office Box 2367  
Augusta, Georgia  
30903-2367

**Comments on Draft Environmental Assessment and Finding of no Significant Impact for the Temporary Deviation, Drought Contingency Plan, Savannah River Basin (October 2008)**

**From Augusta Canal Authority (Augusta Canal National Heritage Area).**

1. General: The Augusta Canal is listed on the National Register of Historic Places, designated as a National Historic Landmark, a Regionally Important Resource in the State of Georgia and as National Heritage Area by Congress. Therefore any major changes in the flows and water levels in the Augusta Canal should be evaluated to determine the historical, financial and cultural impacts to this resource.
2. Specific edits/comments to Draft EA:
  - (a).Page 51, Revise last sentence in first full paragraph to "The Enterprise Mill has been converted to commercial and residential use; houses the Interpretive Center for the Augusta Canal National Heritage Area including operation of the Petersburg Boats for historic tours on the Augusta Canal; and, uses it allocation of water to generate electrical power for its tenants".
  - (b). Page 51, Revise last sentence in third full paragraph as follows:....."and the hydropower operations of the mills will be adversely impacted".
  - (c).Page 51, Add the following statement at the end of the first sentence in the fourth paragraph: "-albeit at a rate that is considerably higher than the cost of hydropower".
  - (d). Add a new section or incorporate a section on the financial impacts of the action as follows:

Given the proposed reduced flows there will insufficient water in the Augusta Canal to maintain the current level of operation of the existing users of the Augusta Canal water. These reduced flows will have a negative financial impact on the individual users depending on how the City of Augusta negotiates the allocation of the available canal water among the users. To quantify this impact requires certain assumptions relative to the allocation of the available water among he users. The following is illustrative of the financial impact and is not intended to suggest any final agreement between the city and the users. The total financial impact would remain fairly constant but the costs to the various users would change depend on any final allocation. **The Authority recognizes that the City of Augusta determines how much of the discharged flow into the river is diverted into the canal, how that water is allocated among the canal users and this is not a Corps of Engineers responsibility or decision.**

Assumption #1: Discharge of 3,100 cfs from Thurmond, 1,500 cfs to shoals area of the Savannah River (as requested by the State of Georgia) resulting in net flow of 1,600 cfs to canal and available to canal users. Augusta Utilities operates as normal, Sibley Mill discontinues hydropower production, Standard Textile operates their small generator only, Enterprise Mill operates one generator, and Augusta Canal Authority discontinues operation of Petersburg Boat Tours based on low water levels in the canal. Based on these assumptions the total negative financial impact on the canal users would \$7,668/day as follows:

**Summary of Financial Impact on Augusta Canal Users based on  
Assumption#1 with flow of 1,600 cfs into the Canal.**

<b>Canal User</b>	<b>cfs Allocation</b>	<b>Financial Impact</b>
Augusta Utilities	900 cfs	None
Sibley Mill	0 cfs-no generators operating.	Loss of power sales of \$1,090/day. Purchase of replacement power from Georgia Power of \$1,200. Savings of \$306/day in water charge to run generators.
King Mill (Standard Textile)	316 cfs producing 700 KW with only one generator operating	Loss of power production of 1,500 KW ( \$1,080/day). Purchase of replacement power from Georgia Power at \$2,880/day.
Enterprise Mill	280 cfs producing 400 KW with only one generator operating.	Purchase of replacement power from Georgia Power of \$600/day.
Augusta Canal Authority	0 cfs	Loss of water revenue from Sibley not producing of \$306/day. Loss of power sales to Enterprise & Georgia Power of \$333/day. Loss of revenue from operation of Petersburg Boat tours due to low water level in canal of \$485/day.

It should also be noted that the City of Augusta has no meters or gauging in place to determine the flows into the shoals area of the river below the ADD.

Assumption #2. The State of Georgia has requested a flow of 1,500 cfs in the shoals area of the Savannah River. Presently there are no gauges or methodology for the City of Augusta to measure this flow in the Savannah River below the Augusta Diversion Dam (ADD). However, there is substantial leakage through the ADD into the shoals area and from personal observation by the Augusta Canal Authority on October 20, 2008 even with no water flowing over the ADD there was substantial flow in the shoals and pooling of water in the river below the ADD. This has been the situation throughout the summer of 2008 with the reduced flows (3,600 cfs) from Thurmond. Therefore this assumption assumes a discharge of 3,100 cfs from Thurmond; no dedicated flow into to the shoals area below the ADD with the only flows coming from the leakage through the ADD just as it has throughout the summer of 2008; Augusta Utilities operates as normal, Sibley Mill operates two of their three generators, Standard Textile operates both generators, Enterprise Mill operates both generators; and the Augusta Canal Authority operates the Petersburg Boat Tours a usual. Based on these assumptions the total negative financial impact on the canal users would \$630/day as follows:

**Summary of Financial Impact on Augusta Canal Users based on Assumption#2 with flow of 3,100 cfs (+-) into canal.**

<b>Canal User</b>	<b>cfs Allocation</b>	<b>Financial Impact</b>
Augusta Utilities	900 cfs	None
Sibley Mill	700 cfs with two generator operating	Loss of power sales of \$630/day.
King Mill (Standard Textile)	900 cfs with both generators operating	None
Enterprise Mill	560 cfs with both generators operating.	None
Augusta Canal Authority	0 cfs	None

In summary, based on the above financial analysis it is apparent that there would be a negative financial impact on the canal users. We recognize that the City of Augusta determines the allocation of the available flows in the river among the users of the canal water. Based on that fact we would recommend that the flow conditions as outlined in assumption #2 above be implemented with a release of 3,100 cfs from Thurmond and to minimize the financial impact on the users of the canal, no special allocation be given to the shoals area. Allocation of the reduced flows from Thurmond under this scenario would not result in any substantial change from the historic operating conditions utilizing the flows from Thurmond Dam.

(e) Impact on cultural and recreational facilities. Low flows in the canal below 3,000 cfs would negatively impact the use of the canal for recreational uses of the canal and the operation of the Petersburg Tour Boats.

(f) Finding of No Significant Impact. A determination that an action has no significant impact is to some degree a subjective or relative determination. It is our position that the proposed action, depending on how the allocation of the available water in the canal is determined, would in fact have a negative impact on the users of the available canal water.



Environmental Affairs  
Bin 10221  
241 Ralph McGill Boulevard NE  
Atlanta, Georgia 30308-3374  
Tel 404.506.7063

October 27, 2008



Via e-mail to: [william.g.bailey@usace.army.mil](mailto:william.g.bailey@usace.army.mil)  
Follow-up original via U.S. mail

Mr. William G. Bailey  
U.S. Army Corps of Engineers  
Savannah District, Mobile/Savannah Planning Center  
Post Office Box 889  
Savannah, Georgia 31402-0889

RE: Draft Environmental Assessment  
Draft Finding of No Significant Impact  
Temporary deviation from Savannah River Basin Drought Contingency Plan

Dear Mr. Bailey,

On October 24, 2008, Georgia EPD made Georgia Power Company aware of the subject draft documents and requested we submit comments to you with respect to the impact on Plant McIntosh, which we own and operate. Georgia Power recognizes the severe impact that the current drought is causing on human and environmental needs and we support efforts to preserve storage in the Savannah River lakes to mitigate those impacts.

On page 6 of Appendix B, Georgia EPD states that "From this exercise, it is clear to us that the likely controlling flow rates are those at Savannah Electric-Plant McIntosh and Georgia Pacific." Table 1 of Appendix B indicates the minimum intake elevation for Plant McIntosh is 7.5 FT-MSL, corresponding to a minimum flow of 3,500 cfs. That conclusion appears based, in part, on communication between Georgia Power and Georgia EPD in November 2007, in which we stated "We believe the intake will function acceptably at flows as low as 3,520 cfs, but we have no recent experience actually pumping at that level to confirm changes in the physical configuration of the river might affect that." On July 22, 2008, the Plant McIntosh intake pumps cavitated when flow at the Clyo gage, about twenty miles upstream of the plant, fell to 4,150 cfs for two days. Augusta gage indicated 3,760 cfs during that period. This experience gives us concern that the flows proposed for the period November 1, 2008 through February 28, 2009, may threaten the ability of Plant McIntosh to generate electricity.

Plant McIntosh is comprised of two separate generating facilities which withdraw from the same intake structure. The river intake pumps draw about 104 MGD through a 163 MW coal-fired steam unit and discharge the same flow through a weir box that overflows

back to the Savannah River. From that weir box, about 20 MGD of the return water is pumped to two 650 MW gas-fired combined cycle units. Because of this unique configuration which re-uses water from one plant to supply the others, any intake problem that threatens one unit also affects the others. The generation of these units is critical to system reliability in southeast Georgia.

We have evaluated the discussion of adaptive management on page 31 of the Draft Environmental Assessment as well as part D.2.d of the segment of Appendix B labeled "Low Flow (Real Time) Management Plan." We understand those provisions provide assurance that Plant McIntosh pumping ability will be preserved through the low release period. "The Corps would restore the water flows up to the 3,600 cfs daily average if requested by either the State of Georgia or South Carolina Adaptive management plans." With this commitment, Georgia Power would be supportive of the plan.

Further, as expediently as possible, Georgia Power will seek engineering measures to mitigate the impact of low flows. Any practicable measures will likely require the support of USACE discussed on page 9 of Appendix B.

Georgia Power is committed to doing our part to mitigate the impacts of this drought while protecting the reliability of Georgia's electricity generation and transmission system. Pursuant to those goals, we will coordinate closely with Georgia EPA and the Corps during this difficult period.

Sincerely,



Tanya D. Blalock  
Environmental Manager, Water & Waste Programs

WRE/

cc: Jeffrey H. Larson, Georgia EPD

393 Fort Howard Road  
P.O. Box 828  
Rincon, GA 31326-0828  
(912) 826-5216  
(912) 826-2363 fax

October 24, 2008

Mr. William Bailey  
Department of the Army  
Savannah District, Corps of Engineers  
P.O. Box 889  
Savannah, GA 31402

Re: Georgia-Pacific Consumer Products, LP, Savannah River Mill Comments on the  
Proposed Temporary Deviation Drought Contingency Plan for the Savannah River Basin

Mr. Bailey:

Georgia-Pacific's Savannah River Mill appreciates the opportunity to submit comments on the Corps' plan to reduce flow from the J. Strom Thurmond Dam by 500 cubic feet per second (cfs) on or about November 1, 2008. We also appreciate the challenging work that the Corps is performing to manage and protect the Savannah River system during these drought conditions. At Georgia-Pacific, we remain committed to excellence in environmental stewardship and water conservation, and we continue to work to improve our water use efficiency within our operations.

We believe that the proposed reduction of 500 cfs will impact our ability to pump water from the river that we need in our manufacturing process. Based on data that we have, the 500 cfs reduction will drop the river level below 2.0 feet at Clyo. Our intake structure design requires a minimum of 2 feet at Clyo to effectively pump water from the river for our processes. Therefore, we are exploring alternative measures to ensure adequate water supply. They are:

1. **Proposed Short-Term Solution:** Install three temporary pumps to supply water to our intake structure. These pumps will be placed on our bulkhead with each having a 20" suction line in the River. The suction lines will be submerged approximately 5-6 feet below the surface and extend approximately 5 feet into the River. The pumps will be powered by diesel fuel and will burn an average of 14 gallons of fuel per hour each. In implementing this short-term solution, the focus would be to ensure the operation of these pumps would pose no environmental risk from potential spills of diesel into the Savannah River, and we have plans in place to provide for secondary containment to mitigate risk. In addition, we are exploring the possibility of powering these pumps electrically, which would provide additional protective measures. While not the preferred option, the use of

these pumps is the most feasible option given the short timeframe for implementation to ensure we can continue operating.

2. **Proposed Long-Term Solution:** Relocation of the intake structure along the shore where the water is naturally deeper would be the preferred method of addressing the impact of reduced flow, because it would enable us to do so in the most environmentally responsible and effective manner possible, while providing for any potential future drought conditions. While we recognize the need for immediate action, the ability for stakeholders to focus primarily on implementing long-term solutions would best serve the concerns of all entities involved.

We have several concerns related to the implementation of the Temporary Deviation Drought Contingency Plan. Because of these concerns, we would request the following:

1. Based on proposed administrative changes in permit coordination between the Corps and the Georgia Environmental Protection Division, we would request that a streamlined process for the temporary measures be established to ensure we can efficiently implement our proposed solutions.
2. We also would ask that the Corps implement the flow reduction in a step-phase manner to allow stakeholders additional time to evaluate the effect of the reduction and to respond in a manner that effectively addresses potential environmental and operational impacts.

If you have any questions or require additional information, please contact Brent Howell at 912-826-9035.

Sincerely,

Russ McCollister  
Operating V.P. and Mill Manager  
P.O. Box 828  
Rincon, GA 31326  
Phone: 912-826-9222  
Fax: 912-826-9284



4278 Mike Padgett Hwy.  
Augusta, GA 30906-9784  
706-798-5711

October 24, 2008

US Army Corps of Engineers,  
Savannah District, Mobile/Savannah Planning Center,  
ATTN: Mr. William Bailey,  
Post Office Box 889,  
Savannah, Georgia 31402-0889,  
FAX 912-652-5787,  
william.g.bailey@usace.army.mil.

RE: DRAFT TEMPORARY DEVIATION DROUGHT CONTINGENCY PLAN  
SAVANNAH RIVER BASIN

Ladies & Gentlemen:

Thank you for the opportunity to comment on the Draft Environmental Assessment. These comments are for International Paper's Augusta Mill. International Paper also operates the Savannah Mill which would be affected in other ways (not a subject of these comments). International Paper-Augusta Mill operates an intake below the New Savannah Bluffs Lock & Dam (NSBL&D) which supports International Paper's Augusta Mill operation as well as Augusta Newsprint Corporation, Deerfield Corporation, and PQ Corporation. The water withdrawal supports operations that represent over \$1 Billion investment and over 1000 direct employees.

We agree with the Corps of Engineers findings of the impact, but would like the following considerations.

- In the event that the reduced flow interferes with our ability to continue intake, please consider a short-term delay until we can get the correction permitted and in place. The water withdrawal structure is designed to accommodate low flows, but with the extended low flow of 3600 cfs over the last several months, the intake may be restricted with sedimentation. During past low flow events, we were able to intake sufficient volumes of water, so we do not anticipate a problem. But if a problem does arise, please help us quickly through the permitting process to dredge our intake channel. We are in the process of putting dredge plans together, surveying the inlet, and preparing the permit application.
- Please start on November 3, - Monday - when both the COE and IP have full staff available instead of November 1 weekend. If it must be the weekend, please provide the water withdrawal permittees a 24-hour emergency contact of persons that can quickly move towards returning the flow.
- Please consider approaching 3100 cfs in daily increments of 100-200 cfs flow reduction from the 3600 cfs. The reaction to flow reduction at Thurman/Clark's Hill dam takes 6 hours before we start to see the effects below the NSBL&D. The

Nov 3

larger, sudden flow change will have a longer, more-devastating effect for our Mill if we do encounter a problem.

- Please assure that consistent minimum flow discharge is maintained through the NSBL&D. Starving the intakes of the river pumps for even a short period of time would result in significant damage to the pumps and possibly production equipment.
- Revise list of industrial users (Page 12) to document that International Paper is below the NSBL&D.

If you have question, please feel free to contact me at, [jeremy.pearson@ipaper.com](mailto:jeremy.pearson@ipaper.com) or 706-796-5363 or Ken Rawls at [ken.rawls@ipaper.com](mailto:ken.rawls@ipaper.com) or 706-796-5305. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy Pearson". The signature is fluid and cursive, with the first name "Jeremy" and last name "Pearson" clearly distinguishable.

Jeremy Pearson, P.E.  
Manager, Environmental Performance





6 SNAKE ROAD, OKATIE, SC 29909  
Phone 843.987.9292 FAX 843.987.9293  
Customer Service 843.987.9200  
Operations & Maintenance 843.987.9220  
Engineering 843.987.9250  
www.bjwsa.org

DEAN MOSS, General Manager

October 22, 2008

Mr. William Bailey  
Acting Savannah Unit Chief  
U. S. Army Corps of Engineers,  
Savannah District, Mobile/Savannah Planning Center  
P.O. Box 889  
Savannah, Georgia 31402-0889

Re: Temporary Deviation to the Savannah River Drought Contingency Plan

Dear Mr. Bailey:

The purpose of this letter is to support the flow reduction to 3100 cfs as outlined in the Environmental Assessment.

The Beaufort Jasper Water and Sewer Authority is the main provider of water and sewer services to 120,000 people in Beaufort and Jasper Counties, South Carolina. We have relied on the Savannah River as our principal water supply since the early 1960s. Our intake is at River mile 39.1, north of Hardeeville with a bottom elevation of approximately -3 ft. msl with our pumps designed to take suction at +3 ft msl. As you can imagine, the stage of the river is important to us. We will closely monitor river levels at our intake, and will notify the Corp if any adverse conditions occur as outlined in the Environmental Assessment.

BJWSA very much appreciates the District's willingness to be creative in its management of the system in these times of drought and we are prepared to assist in any way. BJWSA would also like to request that data from the winter time flow reduction be analyzed to determine if a permanent change can be made to the Drought Contingency Plan. Also, we would like to request additional flow reductions as outlined in a Resolution passed by our Board in November 2007, attached.

Sincerely,

William D. Moss, Jr.  
General Manager

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ROBERT G. HOLZMACHER  
CHARLIE H. WHITE

**Bailey, William G SAM@SAS**

**From:** bill.payne@srs.gov  
**Sent:** Thursday, October 23, 2008 3:12 PM  
**To:** Bailey, William G SAM@SAS  
**Cc:** Ward, Jason M SAW@SAS; Simpson, Stanley L SAW@SAS; Krenicky, Valerie S SAS  
**Subject:** SAVANNAH RIVER SITER (SRS) COMMENTS REGARDING DRAFT EA & FONSI ENTITLED "TEMPORARY DEVIATION - DROUGHT CONTINGENCY PLAN - SAVANNAH RIVER BASIN"

Mr. Bailey,

Thank you very much for the opportunity to provide comments on the titled document. The Savannah River Site (SRS) is fully supportive of the plan to reduce flows from Thurmond Reservoir in order to conserve water while we all deal with the southeastern drought. Below are a few concerns we have regarding the EA. Please contact me if you have any questions about these comments. SRS looks forward to working with the Corps of Engineers and the States as this temporary reduction in river flow is implemented.

Bill Payne  
 Environmental Policy, Program and Permits  
 Savannah River Nuclear Solutions  
 Savannah River Site  
 Building 735-B  
 Aiken, SC 29808  
 Phone: 803-952-7989  
 Email: bill.payne@srs.gov

+++++ SAVANNAH RIVER SITE COMMENTS +++++

1. The EA does not define how quickly the flowrate will be reduced from 3,600 cfs to 3,100 cfs. SRS is concerned that a sudden flow reduction of 500 cfs might jeopardize the Site's ability to maintain operations. We request that the Corps of Engineers reduce the flow from Thurmond Reservoir in 100 to 200 cfs increments while SRS monitors the water level at our intakes and provides real-time feedback to the Corps. This tactic would accomplish two things. First, it would ensure that SRS operations are not shut down inadvertently. Second, it would provide the Corps and SRS with actual data correlating Thurmond releases to SRS intake levels.
2. Based upon Section 3.2.2 of the EA, the "Corps would restore the water flows up to the 3,600 cfs daily average if requested by either the State of Georgia or South Carolina." This response may not adequately address the potential impacts of reduced flow on downstream water users. Reduced flows may not provide adequate water for the needs of the Savannah River Site or other users. In some cases flows could be reduced to the extent that current water withdrawal capabilities would be inoperable, requiring facilities to shut down. The impacts of such a situation are potentially very significant in terms of socioeconomic impacts to communities and industries supported by Savannah River water downstream of Thurmond Dam. Generally, the EA should address these impacts, as well as the impacts of measures that might be necessary to maintain the ability of water users to continue to fulfill their needs under low flow conditions. If the Corps finds these impacts would be significant during the temporary flow reduction exercise, an Environmental Impact Statement should be prepared in order to fulfill the Corps' obligations under the National Environmental Policy Act. If not, during the course of this temporary flow reduction to 3,100 cfs, the Corps of Engineers should respond positively to any individual river water user (not just the States) who requests an increase in the Thurmond Reservoir discharge rate as a result of difficulties they encounter withdrawing water.
3. In Table 1, the flow rates associated with river water levels at SRS intakes should be removed. Instead, Table 1 should be revised to state simply that the level needed in the Savannah River at the SRS intakes is 79 feet above mean sea level. There is no empirical data available to document the Savannah River flow

rate necessary to maintain this level.

4. The following text on page 15 is superfluous, may not be accurate, and should be stricken. "These concerns stemmed from historic methods of disposal of radioactive materials at the Savannah River Site."

**Bailey, William G SAM@SAS**

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**From:** Barb Shelley [hbshelley@wctel.net]  
**Sent:** Tuesday, October 21, 2008 3:17 PM  
**To:** Bailey, William G SAM@SAS  
**Subject:** [Fwd: Release No: 08-36]

Here is the letter from Mr. Cooley of McCormick County  
I hope all the rest come to you directly!  
CPW of McCormick called me today to say they were mailing theirs to you today and I know  
Lincoln Co is working on a letter  
Barb Shelley

----- Original Message -----

**Subject:**Release No: 08-36  
**Date:**Thu, 16 Oct 2008 16:14:46 -0400  
**From:**Bruce Cooley <mccoadmin@wctel.net>  
**To:**<billy.e.birdwell@usace.army.mil>

Dear Mr. Birdwell:

It is my understanding that the U.S. Army Corps of Engineers has proposed an additional outflow from J. Strom Thurmond Dam of 500 cubic feet per second. According to an article in the September 28, 2008 edition of The Augusta Chronicle, water levels in the lake have fallen to their lowest level since 1962. While I realize that the drought conditions have contributed to the low lake levels, I also believe that U.S. Army Corps of Engineer policies have affected the lake levels since non-Corps lakes such as Lake Murray and Lake Greenwood remain near full pool.

McCormick County as an economically distressed county is very dependent on the lake to attract visitors for recreation and tourism. With lake levels at their current low levels, the number of visitors who come to McCormick County has seen a significant decrease. Already several businesses such as convenience stores and boat dock manufacturers have had to close due to their dependence on visitors to the lake. Additional decreases in lake levels will exacerbate the problem.

In addition, the lake provides potable drinking water to the residents of McCormick County. It is my understanding that McCormick C.P.W. from whom the county purchases water has had to spend additional funds to expand its capabilities to extract drinking water from the lake.

Anything that you can do to oppose further reductions to the lake's water supply and to

10/27/2008

return it to a higher level so that visitors would be attracted to the lake again will be greatly appreciated.

Sincerely

Bruce W. Cooley  
County Administrator  
362 Airport Road  
McCormick, SC 29835  
864-852-2231 Office

**Bailey, William G SAM@SAS**

---

**From:** Barb Shelley [hbshelley@wctel.net]  
**Sent:** Tuesday, October 21, 2008 3:11 PM  
**To:** Bailey, William G SAM@SAS  
**Subject:** [Fwd: \_Barrett responds to Army Corps Announcement [text version]]

This should work for Congressman Barrett.. sent to me by his aide, Janice McCord of Greenwood

----- Original Message -----

**Subject:** \_Barrett responds to Army Corps Announcement [text version]  
**Date:** Thu, 16 Oct 2008 15:11:46 -0400  
**From:** McCord, Janice <Janice.McCord@mail.house.gov>  
**To:** <joebrenner@hartcom.net>  
**CC:** Barb Shelley <hbshelley@wctel.net>

If you are having trouble viewing this E-newsletter, please visit [<http://barrettsc0> Congressman J. Gresham Barrett, Serving South Carolina's 3rd Congressional District

\*Congressman Barrett Statement concerning recent

Army Corps of Engineers Announcement\*

Anderson, SC - Congressman Gresham Barrett (SC, 3) released the following statement

"I am pleased that the Army Corps of Engineers is working with us to help reduce the

"The situation in our upper lakes is critical and action must be taken sooner rather

Congressman Barrett has maintained constant contact with the Army Corps of Engineers

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footnotes  
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Contact Information:

Website: <http://www.house.gov/barrett/>

Washington, DC Office  
439 Cannon House Office Building  
Washington, DC 20515  
phone: 202-225-5301  
fax: 202-225-3216

Anderson Office  
303 West Beltline Blvd.  
Anderson, SC 29625  
phone: 864-224-7401

10/27/2008

fax 864-225-7049

Greenwood Office  
115 Enterprise Ct.  
Suite B  
Greenwood, SC 29649  
phone: 864 223-8251  
fax 864 223-1679

Aiken Office  
233 Pendleton St., NW  
Aiken, SC 29801  
phone: 803 649-5571  
fax: 803-648-9038



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October 28, 2008

U.S. Army Corps of Engineers, Savannah District  
Mobile/Savannah Planning Center  
Attention: Mr. William Bailey  
P.O. Box 889  
Savannah, Georgia 31402-0889

RE: Comments on Draft Environmental Assessment (EA) and Finding of No Significant Impact, Temporary Deviation from Savannah Basin Drought Contingency Plan

Dear Mr. Bailey:

As expressed in Robert W. King's letter of October 6, 2008 to Colonel Kertis, the South Carolina Department of Health and Environmental Control (SCDHEC) supports the proposed temporary deviation from the Savannah Basin Drought Contingency Plan to mitigate drought impacts and extend the life of usable storage in the Savannah Basin Lakes. We support the findings of the EA; however, we offer the following comments in an effort to make certain statements in the EA more accurately reflect SCDHEC's positions.

Section 2.7. Water Quality in the Savannah River, Page 15:

1. This section states that aquatic life and recreational uses are generally fully supported along the main length of the Savannah River then goes on to reference South Carolina's 1996 fish consumption advisory. Note that two main stem Savannah River stations are listed on South Carolina's 2008 303d list of impaired waters as being impaired for aquatic life due to zinc while the entire main stem Savannah is impaired for fishing due to mercury. South Carolina's 2008 Fish Consumption Advisory provides additional information on the mercury impairment. The advisory is available on the SCDHEC web site at: <http://www.scdhec.gov/environment/water/fish/advisories.htm>

The fish advisory also states that some fish also contain cesium-137 and strontium-90. The advisory concludes, "Levels of radioisotopes found in these fish in South Carolina are low and have decreased over time." Potential "causes" of the radioisotopes found in fish are not discussed. It is our understanding that Georgia has also included the main stem Savannah on their fish advisory list. Appropriate officials in Georgia should be contacted to verify this and determine if the main stem Savannah is also included on their 303d list of impaired waters.

2. Page 16: Here and on page 32, the documents references Andrew Wachob of SCDNR as providing information on the flows SCDHEC uses for permitting of point source discharges. In the past, Larry Turner of our department has provided this information to you. Please replace Mr. Wachob's name with that of Mr. Turner.

Section 3.1. Alternative Formulation

This section references letters from GA DNR-EPD and SC DNR and includes them in the appendixes. Note that a similar letter was provided by SCDHEC under the signature of Robert W. King, Jr. dated October 6, 2008.

Section 3.2.2. Alternative 1

The "Target Table" provided in this section includes SC DHEC as being the responsible party for observing flows at USGS Station 02198500 (Savannah River at Clyo) and a target of 4,500 cfs. The Department has no problem being designated the responsible party to monitor flows at this station. However, based on comments previously provided to the Corps on flows at Clyo, it is our understanding that this target is not to be a "hard" target the violation of which would immediately result in increased flow from the Thurmond project. Rather, flows below 4,500 cfs would result in a closer evaluation of water quality and salinity data at downstream stations with a decision to increase flows only being made by the states and the Corps if documented water quality problems are observed. If this is not the case, further discussions of this trigger are warranted.

Sections 3.2.2. Alternative 1, 4.3. Biotic Communities-Shoals, and 4.9. Water Supply  
These sections include references to minimum flows to be maintained through the Savannah Shoals by the City of Augusta. It is our understanding, based on comments provided by the City of Augusta, that these sections will need to be revised to more accurately represent the City's position.

Section 4.9. Water Supply

1. This section lists "J.P. Stevens" as having a riparian right to withdraw water from Lake Hartwell. The correct reference to this entity would be "Point West, Inc. formerly know as J.P. Stevens". Note that Point West is not currently withdrawing water from the lake but is considering doing so in the future.
2. Page 12 states that the highest intake elevation in Richard B. Russell Lake is 457.5 msl while on page 50 it is stated that the highest intake elevation is 468.8 feet msl. This discrepancy needs to be addressed.

Please contact me if you have questions concerning these comments.

Sincerely,



David Baize  
Assistant Bureau Chief, Bureau of Water

CC: Robert W. King, Jr., P.E.